H. Stopes
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ART'S
Treasury of Raretie[illegible]
AND
Curious Inventions.

In Two Parts.

PART I. Containing the Mystery of Dying Cloths, Silks, Stuff[illegible] Hair, Feathers, Bone, Horn, Ivory, Leather, &c. The man[illegible] of preparing Colours. Directions to take out Spots, Sta[illegible] Pitch, Tar, Wax, Rosin, &c. out of Silks, Stuffs, Wooll[illegible] Linnen, &c. To recover faded Colours and preserve Appa[illegible] To scowre Silver and Gold Lace, Plate, &c. Preparing Cem[illegible] for Glass, China, &c. Diapering Linnen, making Perfume[illegible] The Art of Drawing, Limning, Painting, Japanning and [illegible] on Colours; Etching, Engraving, Cutting, Guilding, [illegible] melling. Refreshing Pictures, Hangings, Carpets, prepa[illegible] Flock-work-cloth, directions to Paint thereon, [illegible] sundry Colours, prepare Gums, Allum-water, [illegible] thickening Linnen, Washing or Colouring [illegible] Pictures. Tanning Leather, &c.

PART II. Containing the Quality, Generation [illegible] Metals, Natural and Artificial; Directions to [illegible] them for use; to Sodder, Burnish, and Guild [illegible] Inks of all Kinds and Colours. To prepare Gold or Sil[illegible] for Writing, and all manner of Sealing-wax, Wafers, [illegible] Gold and Silver, to know the Fineness, and to detect [illegible] feit Coins. How to take Blots and Writing off [illegible] Parchment. The Mystery of Beautifying, Colouring, [illegible] sing, Cleansing and Perfuming Gloves, Ribands, &c. Imbossing in Plate. Wax-work, Imagery, Dyalling, Gauging. Wash[illegible] ing Point-Lace, Tiffany, Sarcenet, Lutestring, and [illegible] Silks, &c. weighing Ships, Brewing Fine Ale, making Wine[illegible] Legerdemain, and divers other Curiosities.

The Fourth Edition.

London, Printed for G. Conyers, at the Ring [illegible] Little-Br[illegible]

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To the READER.

Reader,

THIS Book contains so many Varieties of Curious Inventions, that I hope it will prove exceeding Useful and Profitable. The Multiplicity of Curiosities I cannot in so small a Compass acquaint you with, but a few I shall insert by way of a Table; but many more thou wilt find in the Book, which I desire thou wouldst read over.

J. White.

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ART's Treasury, or a profitable and pleasing Invitation to the Lovers of Ingenuity.

CHAP. I.

The Art and Mystery of Dying Silks, Stuffs, Cloth, Feathers, &c. in the most Curious and Delightful Colours, with the manner of ordering, making and preparing them, &c.

SO pleasing to the Eyes of Mankind are the various Colours that we daily or frequently behold, that they in a manner captivate and detain even the Fancy it self with Wonder and Delight. Wherefore I have thought it highly convenient, amongst the many [illegible] Secrets and Curiosities this Book contains, as well tending to Profit as Pleasure, if [illegible] to place the Art of Colouring, vulgarly called [illegible] the beginning, as an Introduction to the rest, being much wanted, and frequently coveted by publick and private Persons, to be known, and rightly managed. Wherefore for its better Improvement, take the following Rules and Directions.

To Colour or Dye Wool, or Woollen Cloth a curious Red. Take a considerable quantity of Allom, and dissolve it in Water, wherein Bran has been boiled and strained out, putting the Cloth, Wool, or Yarn to steep in it,

which being well fleeped, put it into other clear Water, heating it over a gentle Fire, putting thereto greening Weed, two pounds to four gallons of Water, ſtirring it about, but not ſuffering it to boil; add more, a handful of unſlaked Lime, and as much Wood-Aſhes, ſtirring about the Materials, adding yet a like quantity of Lime, Aſhes, and a pound of the Powder of Log-Wood, or Red-Wood, and the like of Brazile, and ſo in 3 or 4 hours time a very fair Colour to your Satisfaction will be taken.

To dye Linnen, Thread, or Cloth Red, &c. Take a pound of Sam-ſleure, and ſuffer it for the ſpace of twenty four hours to ſoak in two gallons of Water, heating over a gentle Fire; then add half a pound of the Powder of Brazile, two ounces of Vermilion, and an ounce of Allom, diſſolved in a pint of fair Water.

To dye a clear, or pleaſant light Red. Take Wheat Bran, half a peck, two ounces of Allom, and boil them in four gallons of fair Water, then through a fine hair Sieve ſtrain out the liquid part, then diſſolve in it half a pound of Allom, and the like quantity of white Tartar, and put in the Stuff, Cloth, &c. intended for Colouring, adding three pound of Madder, and perfect the Colour in a moderate heat without boiling.

To dye Silk a Sanguine Colour. Take a pound of Allom, and two pound of greening Weed, bruiſe them well, and pour upon them fair Water; add then half a pound of ground Brazile, heat them over the Fire, and put the Silk in ſome part of the liquid Matter, ſuffering it ſo ſeeth therein, and ſo renew it with the remainder till you find your Colour take, and having it done three times, rinſe it in Lee of Oak-bark, or Wood-aſhes, and afterwards in Water.

To dye a fair Blue. Take white Silk, Stuff or Cloth that is white, and ſoak it in Water, then having wrung the Water out, add two pound of Woold or Woad, a pound of Indico, and three ounces of Allom, and then gently heat and diſſolve them in the Water, and ſo dip your Materials till you perceive the Colour has taken.

To dye a Purple Colour. Take the Silk, Stuff or Cloth that has already taken a blue, and dip it in Brazile and

Allom-water, at moderate heats; and you will ſoon perceive your Colour anſwer your Expectation.

To dye Carnation. Take a dry Purper, and ſoak it a Night in Man's Urine; then take your Cloth that has been ſoaked in Allom-water, and dry'd again, and put it therein, ſuffer the Purper beforehand to be twice ſeethed in fair Water; then ſet another Veſſel by the Fire, and ſuffer the Cloth to take the dye therein.

To dye a deep Red Carnation. Take Linnen and Woollen white, Gall and Allom it well, and take the Herb call'd by the *Dutch* Foli, which is to be found on the Banks of Ditches, to the quantity of a pound well dry'd; *Indian* Lake four ounces, *Spaniſh* Red two ounces; make of theſe and Allom-water a hot Liquor, and dip your Materials therein, at gentle heats three or four times; and it will afford a curious Colour.

To dye Silk Quoins a curious Red. Steep firſt your Silk in Allom-water, giving it a gentle heat, adding thereto in the heating, Bran-water; then take a pound and a half of greening Weed, and ſo beat it up, and put the Silk therein, but let it not ſeeth, then take it out and rinſe it in Ley, and after that in Water, adding ſome Powder of Log-Wood; and ſo heating it up a ſecond time, the buſineſs will be perfected.

To dye a fair Yellow. Take the Stalks, Leaves and Seeds, &c. of Woad, the Roots being cut off, and lay them in ſoak in Ley of Wood-Aſhes for the ſpace of three hours, after that ſeeth them into hot Water and Urine, and heat them up indifferent well, ſtraining the liquid part thro' a Sieve, adding to every two pounds of Woad, two pounds of Verdigreaſe, with the Ley already ſod, ſtirring and well mixing it together in your Liquor, for the ſpace of three hours, and ſo dip into it very hot at three or four times what you intend to Colour.

Another way to dye a curious Purple, viz. In caſe it be Silk you intend to dye, you muſt to one pound of it take four ounces of Allom and a gallon of Water, diſſolving the Allom therein o'er a gentle Fire, putting then the Silk therein, and ſuffering it to lie for the ſpace of four hours,

then take of *Indian* Lake and Indico, each a quarter of a pound, add likewiſe a quart of Urine, and ſo heat them up into a dye, adding about a handful of Cochinele.

A curious Green Water to make. Take half an ounce of Verdigreaſe, bruiſe it well, put thereto the Yolk of an Egg, and a few Blades of Saffron; then take of the Leaves of Spurge half a handful, bruiſe them with a quarter of a pint of Vinegar, ſtraining the liquid part thro' a Cloth, and mingle it with the Materials beforementioned, ſo thin that it may take, either in Dying or Painting.

To make a Black Water to dye Silk, Cloth, &c. Take half a pound of Nut-galls, add to them a pottle of Water, and an ounce of Lamb-black, with a handful of the ruſt or filings of Iron, heat them up, adding half a pound of Coperas, ſeeth them to a half Conſumption, adding then a pint of Gum-water, and ſo ſet it by for your uſe, &c. and it will prove excellent good; the longer it is kept it is the better.

To dye Linnen or Silk a Roſe red. Take to every four yards and a half, a pound of Nut-galls, and ſeeth them in fair Water unbruiſed, for the ſpace of 2 hours, when pouring out the liquid part into another Veſſel or Fat, put your Linnen, &c. into it, and ſuffer it to ſoak for the ſpace of four hours; then wring it dry, and heat it again in Allom and fair Water, adding half a pound of Braſile Powder, and a pound of greening Weed, and ſo by gentle heats make up your Colour to the heighth.

To dye a fair Green. Take Bran-water and Allom, a gallon of the former to a pound of the later, and ſeeth them up till the Allom is diſſolved; then for about a quarter of an hour let your Silk or Cloth lie therein; then take more Bran-water and a few handfuls of Woad, and put it therein, till it become a dark Yellow; then add Verdigreaſe and Indico of each half a pound or more, or leſs of the one or the other, as you would have it lighter or darker.

To dye a good Black. Take 2 pounds of Galls, and half a pound of Coperas, ſeeth them in Water over a gentle Fire, putting your Silk, Stuff or Cloth therein, and ſtirring

ring it about; then hang it to dry, and prepare your dye in this manner, *viz.* Take a large Fatt, and put therein three or four handfuls of Rye Meal, and half ſo much of Swarf of the Grindſtone, or Smith's Water, with two handfuls of Elder-bark, and the like quantity of the ruſt of Iron, and having ſuffered it to ſtand for the ſpace of three days, heat it up, and put your Materials therein.

To make a thick Water to work on Yellow Silk the beſt way. Take 2 quarts of the beſt Varniſh, add to it an ounce of the Flower of Sulphur, half an ounce of Camphire; then ſeeth it a while, and ſuffer it to cool, ſtraining it thro' a Cloth, to take away the groſſer part; and when you uſe it, let it be mixed with a ſmall quantity of Gum-Arabick Water.

To make a curious Red Water. Take two quarts of fair Water, four ounces of Gum-Arabick, a pound of faucet Woad, ſeeth them together, till half be conſumed; and then taking it off, put into the remainder half an ounce of *Spaniſh Green*, and about thirty Grains of Cochingle, and ſo uſe it as you ſee convenient.

To make a curious Blue Water for Silks, Stuffs, or Woollen. Take three parts of Soap-boilers Aſhes, and one part of unquenched Lime, make of them a Ley, and ſuffer it well to ſettle, then add to the thinner part taken off, a pound of Boloemen, ſtirring them well together over a gentle Fire, adding a pound of Woad, and half a pound of Indico, dipping what you intend to Colour therein when it is very hot.

To work on Yellow Silk, White, Grey, or Azure Colour. Take a Pottle of fair Water, and a fourth part of Gum-Arabick, and half a Pottle of Faucet-Woad, an ounce of Arſnick, and the like quantity of Turmerick ground ſmall, and ſeeth them over a gentle Fire, putting a ſmall quantity of Grains therein, and ſo apply it to your Uſe as you ſee convenient.

To make a Red Water for White Silk or Wool, Green, Yellow, Violet or Azure. Take two quarts of running Water, and an ounce of Brazile, heat them up till half be conſumed; then take it off the Fire, and put in an ounce of Grains, and a quarter of an ounce of Gum-Arabick, with

a quarter of a pound of Allom Powder, and ſuffering it to ſtand all Night, in the Morning you may uſe it.

To make Grey Florey. Take Florey, and ſoak it 24 hours, at the end of which, wring it through a Cloth; then take the Aſhes of the Vine, and make a Ley with them, and ſpread the Florey for the ſpace of two hours upon a Table, and having put the Ley into three Veſſels, take the Florey, and put it into one of the ſaid Veſſels, and ſo ſhift it to the reſt, putting before you dip your Linnen, &c. Vinegar to it, and your Colour will be good.

To dye Linnen with Crampmede. Uſe in this a pound of Crampmede to three ells of Linnen, and put it to a gallon and a half of Water, or ſo proportionable to the quantity, and warm it over the Fire, till it appears ready to ſeeth; then add to it two ounces of Galls, and ſo put your Linnen into it, and as often as you take it out, which muſt be frequent, wring it, then having a Ley of fair Water ready heated with Allom diſſolved in it, put the Linnen well wrung into it, and ſo rub it over at the taking out, and dry it; but if you would have it the darker Colour, then it is requiſite to have a Ley made with Lime-Stones, or unſlacked Chalk, &c.

To dye Velvet, or other things requiring it, the moſt curious of Blacks. Take of Galls 2 pound, Coperas half a pound, Smiths Water a gallon, the Powder of burnt Ivory an ounce, and of Oak-bark, and Shoemakers Black ground to Powder, the like quantity, and two gallons of fair Water, mix them well together, and ſuffer them to ſtand in the Sun or ſome other warm place for the ſpace of thirty Days, with often ſtirring about; then put your Materials therein, and as often as you dip, hang to dry, and your expectation will be anſwered.

To make Bran Water much uſed in Dying, &c. Take half a Peck of Wheat Bran, and two gallons of fair Water, ſet them on the Fire, giving them a gentle heat, which being done, put half a pound of Allom Powder into it, and ſuffer it to ſtand a Week or more, with ſometimes ſtirring it about before you uſe it.

To

To dye Wool or Woollen Yarn. Take four pound of Wool or Yarn, two pound of Woad, putting the Woad into a Kettle to 2 gallons of Water; then throw in two handfuls of Wood-Aſhes, and when it ſeetheth, put your Wool or Yarn into it, and let it remain there about half an hour, at what time take it out and wring it, and put it in again, and let it ſeeth as long as before; and then if it be before a brown Blue, it will be a dark Green; or if it was White, it will be a yellowiſh Colour. And thus much at preſent in relation to Coleurs for Dying Silks or Cloth.

CHAP. II.

The moſt Curious Art and Method of Colouring Skins, or any Pieces or Parcels of Leather or Briſtles; as alſo of Guilding Leather with Gold, laying with Silver or Lacquering, &c.

To Colour Skins Green.

TAke the Leaves of Night-ſhade, bruiſe them in a Mortar, ſtrain out the juice, and diſſolve in a pint two ounces of Allom, add half an ounce of Verdigreaſe, and heat them gently over the Fire, and then ſuffering it to ſtand for 24 hours, ſtrike over the Skin with it warm, and ſuffering it to dry, do it again till it has taken the Colour, which will be very lively.

To colour Black Leather after the Order in Germany, &c. Take of the Bark of Elder two pounds, of the Filings or Ruſt of Iron the like quantity, put to them 2 gallons of Rain-water, and ſtop them up cloſe in a Cask or other Veſſel, and ſo ſuffer them to ſtand for the ſpace of 2 Months; then put to the liquid part a pound of Nut-galls beaten to Powder, and a quarter of a pound of Coperas, heating them over the Fire, and ſuffering them to ſtand 24 hours after, and ſo uſe them with a Bruſh, till the Skin has taken an excellent Black.

To

To Colour White Leather the beſt way. Having hung your Skins in Chalk, or Lime-water, till they are grown ſupple, that the Hair or Wool may be ſtripp'd off, ſtretch them on Tenters or by Lines, and ſmooth them over; then take your Colouring mixed, according to the Purport of what you intend they ſhall take, and having firſt bruſhed them over with Allom-water very warm, give them the Tincture, and dry them in the Sun or in ſome warm Houſe, and they will be uſeful on ſundry Occaſions, without any further trouble.

To make White Leather Blue. Take the Berries of Elder a quart, ſtrain out the Juice and boil it with an ounce of the Powder of Allom, and half an ounce of Indico, or ſmalt Blue, and bruſh over the Leather with a fine Bruſh dipped therein 3 or 4 times, ſuffering it to dry between whiles, and the Buſineſs will be effected.

To colour Leather a fair Red. Having rubbed your Leather well with Allom-water, or Allom'd it, take ſtale Urine, ſeeth it and ſcum it till half be waſted; put then to it an ounce of the fineſt Lake, with the like quantity of Brazile in Powder, an ounce of Allom, and half an ounce of Sal-Armoniac, mix them well and keep them ſtirring over a gentle Fire about 2 hours, and ſo uſe the liquid part, and your expectation will be anſwered.

To colour your Leather a curious French *Yellow.* Take one part of Chalk, and another of Wood-Aſhes, and make thereof a good Ley; then ſtrain out the fine or liquid Matter, put it into a Veſſel over the Fire, and put into it Turmerick in Powder, and a little quantity of Saffron, and ſo ſuffer it to ſimper till it becomes pretty thick; then ſet it to cooling, and as you have occaſion uſe it, as before mentioned.

To colour Spaniſh *Leather*, &c. Take that which the *Dutch* call Pomplemelch, warm it, and rub the Leather therewith, then take of *Venis tot Appelen*, and having beaten it ſmall, put a conſiderable quantity of fair Water to it, and let it ſoften over a gentle Fire, then preſs out the Water, and ſo in the liquid part rub or waſh the Skin, doing it ſo often; and after that, take Shoemakers Black the fineſt, and rub over the Skin with it, having

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in the wetting added to it a little Vitriol or Coperas, and ſuffering it to dry, take *Gooſe* or *Hogs* Greaſe in a Woollen Cloth, and rub the Skin over for a great ſpace, where there is a good Fire to ſupple it in; and then rub it over with your hands, till it diſappear, or inſtead of Greaſe, Linſeed or Train-Oil may be uſed, and ſo in caſe of any other Colour, according as the Colours are deſigned.

To dye Briſtles a curious Red for Bruſhes. Take an ounce of Brazile-Wood in Powder, half an ounce of Allom, a quarter of an ounce of Vermilion, and a pint of Vinegar, boil them up to a moderate thickneſs, and dip the Briſtles in when it is very hot, ſuffering them to continue for ſome time in the Liquor, and they will be of a curious Red.

To dye Briſtles or Feathers a curious Green, &c. Take of Verdigreaſe an ounce, Verditur the like quantity, Gum-water a pint, mix them well together, and dip the Briſtles or Feathers, they having been firſt ſoaked in hot Water, into the ſaid mixture.

To dye Briſtles or Feathers Blue. Take an ounce of Indico, as much of Biſſe, as much Allom as a Hazel-nut, put them into Gum-water, and dip the Materials into it hot, hang them up to dry, and clap them well, that they may open. And ſo changing the Colours, you may in this manner dye the aforeſaid Materials of any Colour; as for Black, uſe Logwood and Galls; for Purple, Lake and Indico; for Carnation, Vermilion and Smalt; for Yellow, Berries and Saffron, with a little Tartar mingled or diſſolved in your Gum-water.

To dye Ivory, Bone, or Horn a curious Red. Take the Materials and ſoften them in Water wherein *Tartar* has been diſſolved; then take Vermilion and Brazile, temper them well in Water, boil them up in a Liquor, put your Horn, Ivory, or Bone into it, and ſuffer either of them to be there, it being hot, for a convenient time, and taking them inſtantly out, caſt them into cold Allom-water; and if they have not taken the Tincture at firſt, uſe them in the like manner a ſecond time, and ſo proportioning the Colours, you may in this manner make them take what Colour you pleaſe.

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To marble Books or Paper the beſt way. Take 4 ounces of Gum-Arabick, diſſolve it in 2 quarts of fair Water; then provide ſeveral Colours mixed with Water, in Pots or Shells, and with peculiar Pencils to every Colour, ſprinkle them by way of intermixture upon the Gum-water, which muſt be in a Trough, or ſome broad Veſſel; then with a ſtick curl them and draw them out in ſtreaks, to as much Variety as may be; which done, hold your Book or Books cloſe together, and only dip the edges in on the top of the Water and Colours very lightly; which done, take them off, and the plain Impreſſion of the Colours in mixture will be upon the Leaves, doing as well the ends as the front of the Book in like manner; and in this caſe you may do Paper by dipping it on the flat, as alſo Linnen Cloth, *&c.*

To dye or Colour Horſe Hair, or any Hair, &c. Steep in Water wherein a ſmall quantity of Turpentine has been boiled for the ſpace of 2 hours; then having prepared your Colours very hot, boil the Hair therein, and any Colour, black excepted, will take, but that will only take a dark Red or dark Blue, *&c.* And after this manner with Colours cold or but lukewarm, you may dye the Feathers upon the Backs of Poultry, wild Fowl, Hair on Dogs, Horſes, or the like, in as much Varieties as your Fancy can ſuggeſt.

Another fair Red for Skins, &c. Wet your Skins or Fells in Alloom-water, in which has been diſſolved a like quantity of Salt with half as much Lime, when being again ſtretch'd and dry'd, take the laſt of Brewers drink a quart, put into it an ounce of Brazile Powder, a quarter of an ounce of Vermilion, and an ounce of Allom Powder, thicken them over a gentle Fire by continual ſtirring, and ſo with a Brush or Cloth rub over the Skins at an evenneſs, not laying it thicker on one place than another, and ſo do three times ſucceſſively ſuffering them only to dry the mean while, and your expectation will be anſwered.

To dye Skins a Crimſon colour, &c. Scrape hard ſoap ounces, and diſſolve it in fair Water, and add to that ounces of Allom, boil them over a gentle Fire till th

Wate

Water grow clammy, or a little inclining to thickiſh; then put in a few grains of Cochinele, half an ounce of Lake, two ounces of red Lead, and a quarter of an ounce of Vermilion, and a ſmall piece of Indico, mix them well by ſtirring them together, and keep them upon a gentle Fire, till they are about the thickneſs of the white of an Egg; then having firſt rubbed your Skin over with Allom-water, and ſuffered it to dry, apply this Colour, as has been directed in the former.

To colour Skins a light Blue or Turkey Colour. Take Smalt 2 ounces, red Wine a quarter of a pint, Allom 2 ounces, Vinegar half a pint, and white Starch half an ounce, put them over a gentle Fire, not ſuffering them to become over thick; and then ſoaking the Skins with Allom-water, and ſuffering them to dry as uſually, add to this Colouring half a pint of Gum-water tolerably thick, lay it on glazing it over when dry with a Poliſher.

To colour a light Green. Take the Herb called Horſe Tail, bruiſe it, and add to the juice a ſmall quantity of Verdigreaſe, Allom and Coperas, and over a gentle Fire make it into a Colour; which will prove very pleaſant.

To dreſs or cover Leather with Silver or Gold. Take that which is called brown Red, and grind or move it on a Stone with a Muller, adding Water and Chalk, the later being diſſolved, and with it rub or lightly dawb the Skins over, till they look a little whitiſh; and then, before they are quite dry, lay on your Leaf Silver or Gold, placing the Leaves a little over each other, that no Intermiſſion be found; and when they have well cloſed with the Leather, and are ſufficiently dried on, rub them over with a Poliſher made of ſmooth Ivory, or of a Horſes Fore-tooth, and you will find it very ſplendid.

Another way of Guilding Leather more laſting than the former, viz. Take Gleer made or conſiſting of the whites of Eggs, or you may for want of the former make Gum-water, and with a Bruſh run over the Leather with either of them, which done, lay on your Gold or Silver, and burniſh it over as the former.

To make Leather ſhine without any Gold. Take whites of Eggs, Gum-water, and Powder of Antimony, mix them

them well together by beating, and having your Skins well dry'd, lay the mixture on them, and do it often, till the Leather be quite hid; which done, let the mixture dry, and then burniſh them over; and for want of Antimony, you may uſe black Lead.

CHAP. III.

How to recover faded Colours in Cloth or Silk, to take Spots, Stains, Pitch, Tar, Roſin, Greaſe, Wax, Oil, &c. out of Silks, Stuffs, Woollen or Linnen; to preſerve them from Damage of Worms, Moths, &c. and other Matters, &c.

To make Cloth that has loſt its Colour recover it and look freſh and bright.

TAke of unquenched Lime 2 ounces, of the Aſhes of the Bark of Oak the like quantity, and put them into a quart of fair Water, mixing them well, and ſuffering a ſettlement for the ſpace of an hour, drawing off the clear part, and therewith waſh or carry over with a hard Bruſh the Cloth, and by twice or thrice carrying it over, it will look fair and bright.

To waſh Scarlet that is ſoiled or greaſie. Take 2 ounces of white Tartar, beat it fine, and heat it over a Fire in a pint of fair Water, till it be thoroughly diſſolved and very hot, then ſuffering it to cool a little, take an indifferent hard Bruſh and dip into it, rubbing it lightly over with the ſame, and by ſo doing in a ſhort time it will return to its firſt Eſtate and Colour.

To reſtore Silks of any Colour in the like nature as the former. Take an ounce of unſlacked Lime, and the like quantity of the Aſhes of Vine Branches, and as much Oak-bark, mix them well together in fair Water, and make a kind of a Ley with them over a gentle Fire; which being ſettled, take the clear part, and with a Bruſh or Sponge rub over the faded part, and it will in a ſhort time reſtore it.

To

To make a Soap to take Greaſe, Spots, or Stains out of Cloth, Stuffs, Silks, &c. Take a pound of Roch-Allom, burn it well, and beat it to Powder, add to it the Powder of the Roots of Florence-flame, a Herb ſo called, about half a pound, and to theſe add a new-laid Egg, and 2 pound and half of Cake Soap, make them up with fair Water into round Balls; and when you are deſirous to take out any Spot or Stain, waſh well the place firſt with warm Water, and then lay a laying of this Soap upon it for 3 or 4 hours, and then waſh it off with other warm Water, and in often ſo doing they will diſappear.

Another excellent and approved way. Take Wood-Sorrel and diſtil it in an Alembick with Fumitory, and waſh the damaged place therewith, and it will in frequently ſo doing reſtore it.

A Way to take Spots out of Linnen or Woollen, if Coloured. Take of the Juice of a Limon, 2 ſpoonfuls; 1 ſpoonful of the Juice of an Onion, and warm them over the Fire, and with them often waſh the Spots, and they will no more appear.

How to make a good Ley to take out Spots and Stains. Put into three pints of Water half a pound of Soap-boilers Aſhes, and ſuffer them with daily ſtirring to remain in it for the ſpace of four days, then pour off the clear Water; then mix it as you ſee convenient with Fullers Earth, and lay it hot on the place, and it will with often uſing effect your deſire.

A very good Way to take Spots of Oil out of Cloth. Take Oil of Tartar, and mixing it with the Powder of a burnt Bone, apply it to the Spot, and hold over or upon it a Spoon wherein is a live Coal, and the heat thereof will attract the Greaſe, and render the Spot inviſible.

To take Pitch, Tar, Roſin or Bees-Wax out of any Stuff, Silk or Cloth. Take Oil of Turpentine, warm it a little and apply it to the place, ſuffering it to ſoak in for the ſpace of an hour; and then gently rub it, and you will perceive the Roſin, *&c.* looſened and inſtantly to crumble away.

A Soap-Water to take out any manner of Spots, how to make it. Boil Straw-berries, or the Leaves thereof, in a quart

a quart of fair Water, and a pint of Vinegar; then add 2 pounds of Caſtle Soap, and half a pound of Chalk finely ſcraped; boil them till the moiſture is conſumed, and when you have Occaſion, wet the place with ſharp Vinegar, and rub it over with this Soap, drying it afterward againſt a Fire, or in the Sun.

A ſpeedy Way to take all manner of Spots or Stains out of Scarlet or Velvet, of what Colour ſoever, not changing it. Take Soap-wort, an Herb ſo called, ſtrain out the Juice, it being bruiſed, add to the Juice a ſmall quantity of black Soap, if the Scarlet be not dyed in a clear Grain, and theſe being made thin, waſh the place with the liquid part, ſuffering it to dry between whiles, and by this means in a day or two you will perceive the Spots to diſappear.

To take Iron-moulds or Stains out of Linnen. Take the Juice of a Limon, warm it with a little Powder of Allom diſſolv'd in it, wet it, and as it is wet, dry it with a Spoon wherein is a live Coal, and ſo continue to do for the ſpace of 2 hours, and the Spot or Ironmould in a waſhing or two will diſappear. This will take out Spots of Ink, &c.

To take out oily Spots out of Parchment or oily Paper. Take the Powder of burnt Bone, finely ſifted, and place between two boards, preſſing it hard, ſome of the Powder on either ſide the Spot, and in two days it will be quite vaniſhed.

An excellent Way to take Spots or Stains out of Linnen. Take fair Water, and diſſolve it in Bay-ſalt, and ſteep the Linnen therein; then take Juice of Sorrel and ſharp Vinegar, and rub the Spot with them, ſuffering it likewiſe to ſoak in, and in often ſo doing it will diſappear.

To take away Ink-Stains, Stains with Fruit, &c. Take the Powder of Allom half an ounce, the Juice of Houſleek, or Sengreen 2 ounces, and apply them, the Allom being diſſolved very hot, and the buſineſs will be done.

Inſtructions how to keep Silks from ſtaining in Waſhing. Heat Rain-water, and when it is very hot, put into it Caſtle Soap, diſſolve it well; then ſuffer it to be almoſt cold, after which, ſprinkle in a ſmall quantity of Fullers Earth, and ſo ſcowre out your Silks; then ſuffer them

not

not to lie on heaps, but ſpread them, and clap them between dry Cloaths, and they will be freſh and fair.

Directions to keep Linnen layed up without uſing, from damage for many Years. Having waſhed and well dry'd your Linnen in the Sun, fold it up, and ſcatter in the folding the Powder of Cedar-wood or Cedar ſmall ground, having firſt perfumed your Cheſt with Storax; by which means not only dampneſs is prevented, but Worms or Moths, &c.

Further Directions to keep Woollen or Linnen Sweet and Pleaſant, as likewiſe from being damaged by Moths, Worms, &c. Take Orange Peels, dry them in an Oven, and beat them to Powder, add to that Powder of Elicampane Roots, the Powder of Arras, and that of Juniper, and air your Cloaths when you lay them up over a Fire wherein Bay-leaves are caſt and burnt.

A Pleaſant Water to preſerve Linnen or any other thing a long time, giving it moreover a curious Scent. Take of Spike-flowers 2 pound, Coſtmary 1 pound, Balm an handful, Penny-royal as much, Mace 2 ounces, Arras Powder an ounce, ſoak theſe in White-wine, and diſtil them, and ſprinkle your Cloaths in a fair day, ſuffering afterwards to dry, and then lay them up.

A good Way to waſh any Linnen or Woollen interwoven with Gold or Silver, and not to impair it. Dip the part you deſign to favour in Urine and Allom, and ſuffer it well to be ſoaked; then ſoap the reſt, but not that place, and having waſhed it, hang it to dry in the ſhade, and your Expectation will be anſwered.

To remove Stains occaſioned by Wine or Vinegar. Take new Milk, and ſteep the thing ſtained therein a Night; then take Runnet, and apply to the Stain, rubbing it in; and by ſo doing twice or thrice, you will find it fair as at firſt.

To make Linnen that is turned Yellow, very White. Heat Milk over the Fire, and add to a gallon a pound of Cake Soap ſcraped in, ſo that it may diſſolve, and when the Cloaths have boiled therein, take 'em out, and clap 'em into a Lather of hot Water, and waſh 'em out ſpeedily.

To whiten Cloth the beſt Way. Take your Cloth and buck-

buck it well, then ſpread it upon the Graſs, and ſprinkle it with Allom-water, ſuffering it to continue abroad for three or four days; then buck it again with Soap and Fullers Earth, and uſe it as before, and ſo it will be both thick and white.

To make Salt-water Potable. Take a Veſſel of Wax hollow and empty, and dip it into the Sea, the Water that gets in by the Pores of the Wax will be drinkable. An Earthen Pot not baked, if the mouth be cloſe ſtopt, will purifie the Water; its done more ſpeedily and plentifully. Put Freſh-water Sand into Salt-water, and ſtay a while, putting a Linnen Cloth before the mouth of the Veſſel under that which muſt receive it. It will be ſtrained through, and will be Freſh, having loſt all its Saltneſs. *Wicker.*

CHAP. IV.

Directions to ſcowre Silver and Gold Lace, make Plate bright, and look like new; to take Spots and Stains out of it; to diaper Linnen, whiten Ivory, make Cement for broken Glaſſes, &c. Perfumes of divers kinds, Musk-balls, and other matters.

To ſcowre Silver and Gold Lace, and to reſtore it to its firſt Luſtre, as alſo Imboſs, or Imbroidery.

TAke the Lace, and lay it as ſmooth as may be upon a dry Woollen Cloth; then burn Allom, and beat it to Powder, ſifting it afterwards through a very fine Sieve; then with a Bruſh rub it gently over the Lace, and by ſo doing, and often turning it, the buſineſs will come to Perfection. And thus,

To ſcowre and take Stains out of any Silver Plate, &c. Steep your Plate in Soap-leys for the ſpace of four Hours; then run it over with Whiting wet with Vinegar, ſo that it may ſtick thick upon it, and dry it by a Fire; after which, rub off the Whiting, and paſs it over with dry Bran, and the Spots will not only diſappear, but it will look exceeding bright.

To

To boil up Plate, that it may look like New. Take of unſlacked Lime a pound, of Allom the like quantity, Aqua-vitæ and Vinegar of each a pint, and of Beer-grounds two quarts, boil the Plate in theſe, and they will ſet a curious Gloſs upon it.

To make any Linnen at the firſt appearance look like Diaper. Take it when new waſhed, ſpread it upon a Table ſomewhat damp, and ſprinkle it over with a Bruſh dipped in Allom and Roſe-water, in form and manner as beſt ſhall ſuit with your Fancy.

To whiten any piece of Ivory that is turned Yellow, as alſo Bone, &c. Take a pound of Quick-lime beat ſmall, and place it on the Ivory till it be covered; then pour gently and by degrees Vinegar thereon, and ſo ſuffering it to lie for the ſpace of twenty four hours, take it out, and rub it with Allom-powder, and the firſt whiteneſs will be reſtored; and in the like manner Bone may be uſed and ordered.

To Cement broken Glaſs, or China Ware, a good Way. Take the whites of two Eggs, half an ounce of Quick-lime beaten to Powder, a dram of the Powder of burnt Flint, and the like quantity of Gum-ſandrick, temper them well together, and add for the better moiſtening a little Lime-juice; with a Feather anoint the edges of the broken Veſſels, and clap the pieces together by a warm Fire, and if your hand be ſteady, the Fracture will hardly be diſcerned, or White Lead and Oil, ſuch as Painters uſe.

To remove Spots and Stains out of very thin Silks, &c. Take Whitewine Vinegar a pint, make it indifferent warm, then dip a black Cloth into it, and rub over the Stains; then ſcrape Fullers Earth on it, and clapping dry Woollen Cloaths above and beneath, place an Iron indifferently hot on the upper, and it will draw out the Spot, &c.

To make an excellent Perfume preventing Peſtilential Airs, &c. Take Benjamin half an ounce, Storax the like quantity, as much of Galbanum, temper them being bruiſed into Powder with the Oil of Myrrh, and burn them in a Chafing-diſh; or for want of theſe, take

Roſe-

Roſemary, Balm and Bay-leaves, heat them in Wine and Sugar, and ſuffering the moiſture to conſume, let them likewiſe burn by the heat of the Pan, and they will caſt a curious Scent.

To Perfume Cloaths. Take the beſt Cloves an ounce, dry them in an Oven, and beat them to Powder, do the ſame by a like quantity of the Wood of Rhubarb and Cedar, and ſprinkle them in your Box or Cheſt, and they will not only caſt a curious Scent, but likewiſe preſerve them againſt Worms and Moths.

A curious Scent or Perfume to carry with one when going abroad in damp Airs, or to viſit ſick or infected Perſons, and is wonderful good for all Pains in the Head. Take Orange-flower, Butter an ounce, Oil of Nutmeg a quarter of an ounce, Amber-greaſe a dram, and Civet a ſcruple, mix them well together, and carry a ſmall Box of it about you, ſmelling to it as you have occaſion.

To make a ſweet-ſcented Powder very Pleaſant. Take Rice-grounds, and the ſmall of white Starch a like quantity, pound them in a Mortar, and ſift them well through a fine Sieve, dry the duſt in an Oven, or before the Fire; then infuſe to each pound a grain of Civet, and half an ounce of Roſe-ſcent, and keep it looped up till it be well infuſed; and then uſe it for your Hair, or otherways at your diſcretion.

To make ſcented Waſh balls the beſt Way to keep, &c. Take Caſtle Soap, ſcrape it into new Milk, and heat it over the Fire till it melt and again become thick, then put a ſmall quantity of Amber-greaſe, Lavender-cotton-flowers beaten and dry'd till they are as fine as Meal, and a little Spirit of Cloves or Cinamon, and ſo make them up into Balls, and lay them a drying in a warm place, but not in the Sun.

A Perfume to drive Vermin out of a Houſe, &c. Take Burgundia-pitch an ounce, Brimſtone half an ounce, Storax the like quantity, the Powder of Mother-Amber a dram, beat and mix them well together, and burn them upon a Chafing-diſh, and where the ſcent comes, the Mice and Rats will fly with much ſpeed to avoid it.

An

An Ointment or Perfume to remove an ill ſcent that has ſainted the Brain, &c. Take of the Oil of Bay-berries half an ounce, of the Powder of Frankincenſe a dram, the Oil of Mace or Spirit a ſcruple, as much of the Oil of Turpentine, mix them well together, and keep them in an Eſſence Bottle.

An Eſſence that will immediately Perfume the Place, how to make it. Take Cinamon an ounce, Camphora half an ounce, Opopanax a dram, Roſes clean picked a handful, Rue and Roſemary Flowers the like quantity, the Gum of Myrrh a dram, bruiſe them well, and put them into a ſmall Alembick, or Glaſs Retort, and take the Eſſential part in a Bottle, ſtopping it cloſe, unleſs when occaſion requires it, and then by opening it you will ſoon find the Effects anſwer your Expectation.

CHAP. V.

The curious Art of Drawing in all its Perfection, as well Humane Bodies, as Birds, Beaſts, Fiſh, Landskips, Building, and many other rare Portraicts, by plain and eaſie Rules, in due proportion and manner.

SEeing Limning or Drawing is an Art very curious, much admired, and ſought after in all Ages, and eſpecially in the preſent, I have thought it convenient to lay down Methods and Rules for the Inſtruction of Learners eſpecially, thereby to enable them for greater acquirements, *&c.*

The firſt Material thing to be known is, the neceſſary Inſtruments requiſite to be uſed on this occaſion, *viz.* Firſt Sallow coals, or Sallow-wood burnt to a Charcoal, that it may be ſharpned in the form of a Pencil, to touch over lightly the firſt draught. Secondly, the out Feathers of a Duck's Wing, to wipe off as you ſee occaſion, what is ſuperfluous, or the matter deſigned to be altered. Thirdly, black Lead Pencils well pointed, to go

over

over your Draught the ſecond time. Fourthly, Pens made of Ravens or Crows Quills, to finiſh the deſign by giving a more curious piece. Fifthly, a Rule and a pair of Compaſſes with three points, to take in and out at pleaſure, the one for black Lead, the other for white or red Chalk, or any other Paſte. And the uſe of the Compaſs is to be obſerved in moſt Drawings, to mark out the equal diſtances after your out-ſtroakes are drawn.

Having the 'foreſaid things in readineſs, proceed to Practice; and in the firſt part begin with a plain Geometrical Figure, ſuch as are found to be the Circle, Oval, Square, Cone, Cylinder, Triangle, which accordingly you may mark out with your Rule and Compaſs till you can readily do it without them, for a Circle well carried will much avail you in any orbicular Form, as the Sun, Moon, Globe of the World, &c. The Oval is a direction for the Mouth, Face, the Foot of a Wine or Beer Glaſs. The Square is very uſeful in confining the Picture you are to copy. The Triangle wonderfully aſſiſts you in making half a Face. The Cone will aſſiſt you in Drawing Globes, Spires of Steeples, and the like. The Cylinder aſſiſts you in Drawing Pillars, Pilaſters, Columns, together with their Ornaments proper to Architecture, &c.

Having conſidered the matters premiſed, proceed to draw Pears, Cherries, Apples, Apricocks, Peaches, Grapes, Strawberries, Peaſecods, and Terſles and other Inſects, with Flowers and Branches of Trees in their proportion: And being a little perfect at theſe, proceed to the third Practice, which is uſually imitating Beaſts. As,

1. Thoſe that are more heavy and dull, *viz.* The Elephant, the Bear, Cow, Ox or Bull, and ſometimes Sheep and Goats: Thoſe more nimble and fleet, as the Horſe, Stag, Hart, Unicorn, Tyger, Lyon, &c. And for Birds, practiſe the Eagle, the Swan, the Kings-Fiſher, the Parrot, the Partridge, the Pheaſant, &c. Then again for Fiſh, the Whale, Salmon, Pike, Carp, Herring, Mackrel, Lobſter, and ſuch other Fiſhes as are moſt in uſe to adorn a Chimney-piece, or any the like matter or

buſineſs

buſineſs, and from theſe proceed to Mellons, Pumpkins, Ears of Corn, Cucumbers, Parſnips, Carrots, Cabbages, &c. When having practiſed your hand in their proportion, and knowing the proper Colours, of which I ſhall treat hereafter, you may eaſily form and illuſtrate them, tho' the Excellency of this Art conſiſts in Drawing a Humane Body to the Life: And becauſe it ought not raſhly to be all drawn at once, I ſhall proceed with theſe in order, eſpecially as to the Rules in general.

CHAP. VI.

To draw the Face in divers Poſtures and Proportions, the moſt exact Rules, and what of Variety is to be conſidered therein.

For Drawing the Face, general Rules, &c.

IN this Caſe curiouſly obſerve the Face in its motion, whether upward, forward, downward, or ſideways, touching lightly the Features, where the Eyes, Noſe, Mouth, and Chin ought to ſtand; then more perfectly go over them, for the Circles, Squares and Triangles that are uſed in this matter may ſerve well enough to guide your Judgment where to place them. And in this Caſe, obſerve diligently the principal Muſcles of a Face, appearing moſt in aged Men or Women. And there is uſually a threefold Proportion obſerved in a Face; as, Firſt, from the top of the Forehead to the Eyebrows. Secondly, from the Brows to the bottom of the Noſe; and Thirdly, from thence to the bottom of the Chin; but in ſome the Forehead is lower, and in others the Noſe longer.

The diſtances between the Eyes conſiſt in a full Face of the length of one Eye, but in a three quarter or ſide-face, that diſtance is leſſened anſwerable to the proportion. As for the Noſtril, it ought to be exactly placed againſt the corner of the Eye. And in a fat Face, you

will perceive the Cheeks to ſwell, when on the contrary, in a lean Face, the Jaw-Bones ſtick out, and the Cheeks fall in.

You may diſcern a ſmiling Countenance, by perceiving the corners of the Mouth to turn up a little; and a frowning or ſowre Countenance, by the Foreheads bending and ſomewhat wrinkling on the top of the Noſe.

To draw a foreright Face, make the form of a perfect Oval, divided into three equal parts, by two Lines. In the firſt part place the Eyes: In the Second, the Noſtrils: And in the Third, the Mouth, obſerving to keep the Eyes diſtant from each other, the length of one Eye, and that their inward corners be perfectly over the outſide of the Noſtrils.

To draw an upright Head, it muſt be made equal with three Lines every way, either upward, downward, higher or lower, and that muſt, as the former, be divided into three equal parts.

To draw the inclining, or foreſhorten'd Face, obſerve how the Lines concord or agree together, and with eaſe you may draw, in their proper places, the Noſe, Mouth and other parts, with a little Practice, and in theſe forms it is requiſite that you are very perfect, as being Rules of frequent uſe; for of the many Parts of Man's Body, the Face is moſt difficult; but having got the true Proportion, with your Meaſures, you will be capable, let the Face turn which way it will, to form it; and further note, that whatſoever Proportion the Face you are to imitate bears, your outſtroaks muſt be formed accordingly.

As for the Noſe, it requires to its due Proportion much Care and Diligence, as being the moſt eminent part of the Face; in which eſpecially obſerve the hollowneſs, roundneſs, and indenting of the Noſtrils, &c.

The next thing, eſpecially where the Body is to be covered, is to be conſidered of the Hands, in their ſeveral Poſtures and Poſitions, as well by Meaſure as without; as alſo Hands and Arms, of whoſe Poſtures, as well as the former, it would not be unneceſſary for the Learner to get Draughts for his better Imitation, which may be had

moſt Picture-Shops for a ſmall matter, ready done.

When you have practiſed, and are a little expert in drawing the Hands and Arms, &c. proceed to the drawing of Feet in their ſeveral Poſtures, as well without as with Meaſure; which having attained ſeparate, exerciſe your Skill in drawing Legs and Feet conjunct or joined together, that ſo underſtanding the frame and particulars of the whole Body, you may be the better underſtanding in drawing the Figures in their due Proportion and right Poſtures, in doing which there is no ſmall difficulty. And in this manner, having proceeded to form the Members, draw the other parts of the Body, as the Shoulders, Back, Breaſt, Belly, Secrets, Thighs, and the like, and laſtly take care in due proportion to join them, that they may appear firm and compleat.

Coming to practiſe upon an entire Body, the beſt way is to begin with thoſe of Children; and my reaſon is, becauſe they are generally fat and plump, and rounder than the Bodies of Men and Women, and conſequently require ſo much Curioſity in the Obſervation of Muſcles and other Features, which render the drawing leſs difficult.

As for your further Direction in drawing, Obſerve ever to begin at the Head, and ſo proceed by degrees, running the whole lightly over at the firſt, and encreaſing more fully, as you ſee occaſion, ever being careful to take notice, that your parallel Joints, Muſcles, &c. be rightly proportioned, and exactly oppoſite; alſo that the motions of the Body be anſwerable to each other, and that the Parts and Limbs have a due Symmetry, not being faulty in the Indecency of having one great Arm or Leg, and another ſmall one, nor a great Finger upon a ſmall Hand, neither further than the proportion requires, ſuffer one Limb, or Member to be longer than another; and altho' it ſo happen, which it frequently does, that at firſt you commit Errors of this nature, yet be not diſcouraged, for often practice will redreſs 'em.

Having thus far proceeded with Succeſs, and being indifferent perfect herein, you muſt conſider what it is to ſhadow, and in this caſe obſerve the following Rules.

The out-lines of the Draught of any Picture give the Symmetry or Proportion, which ought to be ſufficient to a good Judgment, but the Lines and Shadows produce to the leſs Curious, the lively likeneſs in Shadowing; therefore of any Picture, you muſt take notice to caſt your ſhadow always one way, *viz.* on which ſide ſoever you begin to ſhadow your Figure, whether on the right or left Hand; as in the Figure of a Man, if you firſt proceed to ſhadow his left Cheek, the left ſide of his Neck, Body, and all other parts muſt be ſhadowed, unleſs the right ſide of the Figure be dark, by reaſon of ſome other Body ſtanding between the Light and it, as ſuppoſe 3 Men were ſtanding together; then muſt the Body, or Figure in the middle, be darkned by the foremoſt, unleſs the light by facing it come between them.

Further note, that all Shadows muſt conſequently grow fainter, as they are further removed from the opacous Body from whence they proceed. But in caſe of Storms, where Clouds, or Waves, by contending Winds are driven one againſt another, contrary Shadows are allowed, as ſtriving for Superiority, and ſo you muſt be ſure to ſupply the greateſt firſt, and according to your Judgment, ſupply from them the leſſer.

All circular Bodies muſt have a circular Shadow, as they have a circular Form, and as the Object of Light which cauſeth the Shadow is circular.

And now for your further Information of this kind, obſerve that a Man ſtanding, from the top of the Head to the bottom of the Feet, is in due proportion eight times the length of the Head. The Arm when it hangeth ſtreight down, reacheth within a ſpan of the Knee; the Hand muſt be the length of the Face, and ſpread broad, muſt cover it, and no more; and further note, that in Drawing a Figure ſtanding, you muſt in the firſt place draw that Leg which the Body ſtands firm upon, or elſe your Figure will undecently decline one way more than another, as if it were falling. The Arms of a Man extended are his full length; and ſo of a Woman in the various particulars. Thus having directed you in the Drawing and Proportioning naked Figures,

now proceed to give Directions about Garments, &c.

As in Naked Figures, it is obſerved you draw the outlines firſt; ſo you muſt do in Drapery or Cloathing, leaving ſpace within for your greater or leſſer Folds; then firſt draw the greater Folds, and break them into leſſer contained within them, and the cloſer the Garment fits to the Body, the narrower and ſmaller muſt be the Folds, and in ſhadowing, the innermoſt muſt be the harder, and the outermoſt ſofter.

Continue always throughout your Garment the great Folds, but as for the leſſer, break them off, as you ſee convenient, and the finer your Drapery is, the fuller and ſharper muſt your Folds be, and the Shadow the ſtronger, yet more pleaſant to the Eye, ever taking notice, that that part of any Garment that ſits cloſe, as the Body, Coat of a Man, the Breaſts of a Woman, and the like, muſt not at all be folded, but rather with a ſweet Shadow repreſent that part of the Body that the Garment appears to cover, as Women's Breaſts, with a ſweet round Shadow, &c. And thus much for the Body of Man in Drawing.

CHAP. VII.

Landskips, what they are, and what is required in the Drawing, and Curious Proportioning them Pleaſant to the Eye or Fancy, &c.

A Landskip is that which giveth a pleaſant Proſpect of Trees, Hills, Rivers, Cattel, and other Rural Delights, with Towns, Cities, Caſtles, Promontories, Rocks, Ships, Boats, Barges, and whatever the Fancy of that kind can form. To expreſs which, and make all truly appear natural as they ought, according to the true proportion and diſtance, obſerve in every Landskip to make a very fair *Horizon* appear, the Sky either clear, or overcaſt with Clouds, expreſſing the Riſing or Setting of the Sun to iſſue as it were from over ſome Hill, Mountain or Rock; but in a fair Landskip, beware you expreſs

not the Moon or Stars, which are only to be ſeen in a Night-piece; and in caſe ſuch a piece be required, you may draw an Aſtronomer with his Quadrate, taking the height of the Moon; another with his Croſs-ſtaff, taking the diſtance of certain Stars; ſome ſtanding with a dark Lanthorn far from them, to give them Knowledge of their Degrees, an Owl flying in the Air, Men catching of Partridges with Low-Bells, a Woolf worrying of Sheep, and the like; being natural to ſuch Pieces.

If in any fair Landskip you expreſs the Light of the Sun, ever obſerve, that throughout your whole Piece you caſt the Light of your Trees, Buildings, Rocks, Ruins, and all things mentioned, or expreſs'd within the Work, thitherward: Obſerve further to leſſen your Bodies proportionably, according to the nearneſs or diſtance they ſhould naturally appear, ſo that the further the Landskip goeth from your Eye, the fainter you muſt expreſs any thing ſeen at a diſtance, till at laſt the Earth, Water, and Sky ſeem to meet, as do the Colours in a Rainbow; wherefore when at any time you ſee good Pieces of this kind, take your Obſervation more particularly from them, and imprint the Fancy as well as may be in your Mind.

CHAP. VIII.

The Curious and much eſteemed Science of Painting or Limning in Water Colours, and how exactly to proceed therein, either on Parchment, Glaſs, or Copper, with the mixture and diſtinction of the ſundry Colours, and other Rare Curioſities.

HAying gone over that which we may properly term Limning, or, as many will have it, Drawing; I now come to that Part, vulgarly known by the Appellation of Limning, *viz.* laying in water Colours the moſt curious

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of all, and much practiſed by Perſons of the beſt Quality.

To fit your ſelf, and prepare for the Practice of this, you muſt have Gums of all ſorts to make your Waters as occaſion requires; alſo a Marble flat Stone, a Muller, Colours of various ſorts, liquid Gold and Silver, Size to lay Gold, *&c.* Parchment, of the fineſt Pencils of ſundry ſorts, Pots and Shells to put your Colours in.

To make your Gum-water, take Gum-Arabic, White, Clear, or Tranſparent, for that which is Yellow, or of an Amber-Colour, is inſignificant; tie up a quantity in a Rag, and hang it in fair Water, till it be diſſolved, then the Water being ſtiff enough for your purpoſe, mix your Colours with it, always having two ſorts to make a weaker or ſtronger, as the matter requires.

Gum-Lake is a compound Gum made of whites of Eggs finely beat, Honey, Gum of Ivy, ſtrong Wort, *&c.* which being well mingled and beat together, they will run like Oil, and in the end harden; and this you may buy ready-made, as the former, obſerving only, that it be Clear and Tranſparent.

As for the Colours, there are ſimply ſix, *viz.* White, Black, Red, Yellow, Green, and Blue; to which ſome add Browns, but they are generally compounded: Of either of theſe there are ſeveral ſorts, as theſe, *viz.* Blacks the beſt, are burnt Ivory, Cherry-ſtones, Lamp-black. The Whites are Ceruſe and White-Lead. The Reds are Red-Lead and Lake. The Blues are Indico, Ultramarine, Biſe-ſmalt. The Greens are Biſe, Sap-green, Pink, Cedar-green. The Yellows are Engliſh Oker and Maſticote. The Browns are Umber, Collens-earth, Spaniſh-Brown.

Theſe (tho' there are others) are the principal Colours in Limning; and therefore I chuſe to ſpeak of theſe only in this place, the others omitted being fit only to Colour Pictures, or waſh Maps, *&c.* and of theſe.

The Colours to be waſhed are Biſe-ſmalt, Cedar, Ultramarine, Maſticote, and Red-Lead. The Sap-green is only to be ſteeped, and the reſt I have mentioned are to be waſhed and ground.

To walh Colours, you muſt put a quantity of the Colour intended into a clean earthen Diſh, and pour Water thereto very clear, ſtirring the Colour and Water together, ſuffering it to ſtand a while, and perceiving the Greaſe or Scum to riſe, take it off, and pour out that Water, putting other Water to the Colour, &c. and ſo do till the Water become clear, and the Colour at the bottom remain fine, then pour away the Water gently, and you will find the Colour ſticking about the ſides and edges of the Diſh, as alſo at the bottom, and if it ſo happen, that you can get an ounce of pure Colour out of a pound (tho' the reſt is ſerviceable for many uſes) it is ſufficient.

In ſteeping Sap-green, you muſt put it only into fair Water, adding a fourth part of Allom-powder to raiſe the Colour, and at the end of twenty four hours it will be a curious Green.

As for the Colours that are to be waſhed and ground, take a ſmall quantity of either, and put it into a clean Shell, adding a drop or two of Gum-water, and work it about the ſides of the Shell with your Finger, ſuffering it there to ſtick till it is dry; then draw over it your Finger, and if any come off, then you muſt add more Gum-water, but being dry, if it glitter or ſhine, it is a token there is too much Gum in it, which you muſt remedy, by tempering it up with fair Water only.

There are ſome Colours, as Umber and Lake, which parch and crack when they are dry, and therefore to bind them you muſt temper them with fine Sugar-candy diſſolved in fair Water, and ſo you muſt do by other hard Colours ſubject to this defect.

To burn the Colour thereto appropriated, put them into a Crucible, cover it with a Lid of Clay, and ſet it on a hot Fire, and ſuffer it to be red hot, and when the Colour is cold, you may waſh or grind it, as the Nature requires, but do neither before they be throughly burnt.

To grind the Colours I have directed ſo to be uſed, take a quantity of any of them, cleanſed from dirt and filth, and laying it upon your Stone, bruiſe it a little with your Muller; and then with fair Water grind it

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till the Colour be very fine, then have in readineſs a large Chalk-ſtone with Troughs or Furrows in it, and pour your Colour into it, and there ſuffer it to remain till it be well dry, at what time take it out, and reſerve it in Papers or Boxes for your uſe.

Of theſe ſix ſimple Colours, adding the Brown, many may be compounded for Faces of all Complexions, Garments, Landskips, Buildings, Rivers, Birds, Fiſh, Beaſts, &c. As thus,

To make a Violet Colour take Indico, White and Lake, and at Pleaſure you may, as you take more or leſs of a Colour, make it lighter or darker.

Lead Colour you may make of Indico and White mixed and tempered together.

Make Flame Colour, or Colour for flaming Fire, of Red-Lead and Maſticote heightened with White.

To make a Scarlet Colour, take Red-Lead, Lake, and a ſmall quantity of Vermilion: For note, that the later is not good in Limning.

To make a Light Green, take Pink, and Smalt, with White to make it lighter as occaſion requires.

To make a Purple Colour, take Indico, Spaniſh-Brown, and White well tempered and heightned.

To make a Bay Colour, take only Spaniſh-Brown and White.

To make a Murrey Colour, take Lake and White.

Many other Colours are made by mixture, too tedious here to be recited; wherefore I leave it to the diſcretion of the Practitioner, to mix them ſuitable to his Work or Fancy, and proceed to the practical part of this Curious Art, &c.

To kill Rats and Mice. Mix unſlack'd Lime with Oatmeal, about half as much Lime as Oatmeal, and lay on Trenchers where they come, they eat it greedily, and it burns their Guts. *Proved.*

Another. Take Filings of Iron or Steel and mix with Oatmeal, lay on Trenches where they come.

Another. Take Rats-bane and powder it, and mix it with Oatmeal, and lay where they come. *Proved.* It is rank Poiſon, therefore be careful.

To wash Colours, you must put a quantity of the Colour intended into a clean earthen Dish, and pour Water thereto very clear, stirring the Colour and Water together, suffering it to stand a while, and perceiving the Grease or Scum to rise, take it off, and pour out that Water, putting other Water to the Colour, &c. and so do till the Water become clear, and the Colour at the bottom remain fine, then pour away the Water gently, and you will find the Colour sticking about the sides and edges of the Dish, as also at the bottom, and if it so happen, that you can get an ounce of pure Colour out of a pound (tho' the rest is serviceable for many uses) it is sufficient.

In steeping Sap-green, you must put it only into fair Water, adding a fourth part of Allom-powder to raise the Colour, and at the end of twenty four hours it will be a curious Green.

As for the Colours that are to be washed and ground, take a small quantity of either, and put it into a clean Shell, adding a drop or two of Gum-water, and work it about the sides of the Shell with your Finger, suffering it there to stick till it is dry; then draw over it your Finger, and if any come off, then you must add more Gum-water, but being dry, if it glitter or shine, it is a token there is too much Gum in it, which you must remedy, by tempering it up with fair Water only.

There are some Colours, as Umber and Lake, which parch and crack when they are dry, and therefore to bind them you must temper them with fine Sugar-candy dissolved in fair Water, and so you must do by other hard Colours subject to this defect.

To burn the Colour thereto appropriated, put them into a Crucible, cover it with a Lid of Clay, and set it on a hot Fire, and suffer it to be red hot, and when the Colour is cold, you may wash or grind it, as the Nature requires, but do neither before they be throughly burnt.

To grind the Colours I have directed so to be used, take a quantity of any of them, cleansed from dirt and filth, and laying it upon your Stone, bruise it a little with your Muller; and then with fair Water grind it till

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CHAP. IX.

Inſtructions for the preparing your Tablets, and laying on your Colours in their graceful Shadows and Proportion, and what is to be obſerved as to the Lines in the Face, Complexion, and Procedure in Drawing Curious; and many other Matters.

WHen you have prepared your Colours, prepare likewiſe good Pencils; to know them, draw them wet thro' your Mouth, and if they come to a Hair, or ſharp point, they are good, but if they after that ſtand rough, or Hairs ſtare, or ſtart out at the ſide, they are naught, and to be rejected.

The next thing is to prepare your Table; and in this caſe, get a fine Paſteboard ſleeked as ſmooth as a Card; then fine Parchment or Vellum, and ſtarch it upon the Board, as ſmooth and even, that no wrinkle, or riſing may appear; to perfect which, you muſt lay the Parchment ſide on your Stone rubbed very clean, and poliſh the contrary ſide, and let it dry in the ſhade.

Having thus prepared a Table, as big as you intend your Picture, chuſe a Light fair and large, free from Shadow, being if poſſible a Sky-light on the top of a Houſe, yet ſuch a one, as the Sun-beams do not penetrate or glance upon, obſerving to begin and end your Work by one and the ſame Light, keeping the Room clean, that no Duſt may fly about to injure your Work.

The next thing to be conſidered, is your manner of ſitting; and in this caſe, let your Desk be ſo placed, that when you ſit before it, your left Arm may be placed toward your Light, and your right Arm from it, that your Light may ſlaunt upon your Work. And if you are to draw the Picture of any live Perſon, the Poſture being agreed upon, ſuffer him or her to ſit above two yards diſtant from you, and as level with you as may be, marking well, that whenſoever the Party moves, tho'

never

never ſo little, for never ſo little motion of the Body or Face, if not recalled, may occaſion in a ſhort time many Errors; and when you undertake this, the following Materials are requiſite to be near you, *viz.*

Two ſmall Diſhes or Sawcers with clean Water, the one to waſh your Pencils in when foul, and the other to temper your Colours withal; a fine large Pencil to cleanſe your Work, called a Fitch-Pencil; a ſharp Penknife to take off Hairs, coming from your Pencil, or Spots that may fall upon your Card; a Paper having holes cut therein, to lay upon your Card, to cover it from Duſt, and to reſt your Hand upon.

If your Carnation, or fleſh-Colour be tempered up, it muſt be ſomewhat lighter than the Complexion of the Party you are to draw. If it be a fair Complexion, you muſt have White-Lead and Red-Lead well tempered. If the Complexion be ſwarthy or brown, add to your White and Red-Lead, Maſticote, or Engliſh Oker, or both, if occaſion require it; but let the Complexion be what it will, be ſure to temper your fleſh-Colour lighter than the Party to be drawn; for if it be too ſad, there is no remedy; and obſerve to place your Shadows diſtinct from each other in a large Shell: And note, that in all your Shadows you muſt uſe ſome White; wherefore in the firſt place, lay a conſiderable quantity of White by it ſelf, over and above what the Shadows are at firſt tempered withal. In the ſecond place, for Red uſual to the Cheeks and Lips, temper Lake, and Red-Lead. In the third place, for your blue Shadows, as Veins, or under the Eyes, take Indico and White. In the fourth place, for your faintiſh green Shadow, take Engliſh Oker, White, and Indico, or ſometimes Maſticote. In the fifth place, for a deep Shadow, take White, and Engliſh Oker and Umber. Sixthly, for dark Shadows in the Faces of Men, take Lake and Pink, for they make an excellent fleſhy Shadow. And theſe being the chief Shadows, I leave what may further occur of this kind to your diſcretion.

Having all things in readineſs, the next thing you proceed to, is to draw the Face, in doing which take the

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following Method, *viz.* lay the Ground with the Colour anſwerable to the Complexion of the Party; and then begin the Draught, the Party ſitting. Now to finiſh a Face, three Operations of ſitting are required. At the firſt ſitting, you muſt only lay the dead Colour. At the ſecond, go over the Face more curiouſly, nearly obſerving whatſoever may conduce to the Grace or Deformity of the Perſon to be drawn, conſidering it in a ſweet diſpoſe, and well couching the Colours one within another. And in this ſitting you perfect what only was rough before, by laying on the deep Colours, ſo that at the third ſitting you may finiſh the Face; as in the Eyes, Eyebrows, Hair, and Ears, which things are the laſt Work, and not to be perfected till the Hair, Curtain, or Backſide of the Picture, as alſo the Drapery be finiſhed. And of theſe ſittings in their Order.

The Operation of the firſt ſitting, &c. Having laid your Ground for the general Complexion, the next Work muſt be to draw the out-lines, which you muſt effect with Lake and White mingled, drawing very faintly; ſo that if you chance to miſs your Proportion, you may alter it with a deeper mixture of the ſame Colour.

Having drawn the Proportion of the Face, add to the former Colour a ſmall Proportion of Red-Lead, tempering it faintly to the Colour of the Cheeks and Lips, at the tips of the Chin and Ears, about the Eyes and the Roots of the Hair, placing the Red Shadows; and as for the Shadows, they muſt not be put in with the flat of the Pencil, but with ſmall touches after the manner of Etching, and in this manner going over the Face, you will cover your Ground with theſe and the like Shadows: And in theſe dead Colours your curioſity need not be great, only ſtrive to imitate Nature as near as may be, for the roughneſs of the Colours may be mended at the ſecond Operation.

Having duly placed and proportioned your red Shadows, in the next place, put in your faint and blue Shadows about the corners of the Eyes and Balls, and your greviſh blue under the Eyes, and about the Temples, working them ſweetly and faintly over by degrees, heightning

heightning the Shadow as the Light falls; as likewiſe the hard Shadows in the dark ſide of the Face under the Eyebrows, Chin, and Neck, with ſome ſtronger touches on thoſe places than on the light ſide of the Face, and ſo bring all your work together to an equal roundneſs, giving Perfection to no particular Part, at this time, but take a full view of your Object; and conſider, how near you hit the Life, not only in ſeeming likeneſs, but roundneſs, boldneſs of Poſture, Colouring, and ſuch like. And having by this time wrought your fainter Shadows into the red Shadows, you may venture to take a touch at the Hair, diſpoſing it in ſuch curls, folds, and forms, as you ſhall ſee convenient for Grace and Ornament, only drawing it with ſome Colour ſuitable to the Life, and fill up the empty ſpace with Colours, deepening it ſomewhat more ſtrongly than before in the deepeſt ſhawdowed places. And this may ſuffice for the Firſt Operation.

The ſecond Operation or ſitting. In this ſitting, the Party muſt take the ſame Place and Poſture as before; and then be Curious to delineate with your Pencil, the particular Varieties of Nature: As you drew them over but rudely before, you now muſt ſweeten them with the ſame Colours, by working and driving them one into another; ſo that no rough edge, nor lump of Colour may appear, and this muſt be done with a Pencil ſharper than the former, by which means the Shadow may be ſoft and ſmooth.

Thus having done, proceed to the backſide of your Picture; and if there is a Curtain, as is the uſual manner, required, we will ſuppoſe it to be blue Sattin; and to do it, temper as much Biſſe in a Shell as will cover a ſmall Card, ſuffering it to be moiſt and well bound with Gum; then draw with your Pencil the outlines of your Curtain, as alſo of your Picture, and ſo lay it over very thin with a large Pencil, that it may be the whole ground you intend to do with Blue; and then lay it over again with a ſubſtantial body of the ſame Colour; in doing which, you muſt be ſwift, keeping your Colour moiſt, and not ſuffering any part to be dry till all be covered.

If

If it happen that your Curtain is to be Crimſon, you muſt trace it out with Lake, and lay the ground with a thin Colour, obſerving where your ſtrong Lights and Reflections fall, there lay the Lights with a thin and wateriſh Colour, and the Ground being yet wet, lay the ſtrong and hard Shadows cloſe by the other Lights, with a dark Colour temper'd reaſonably thick.

Thus having laid your backſide, which in the ſame manner you may do with any Colour, your next Work is, to lay your Linnen of a fair White, and your Drapery flat with the Colour you intend it. Then take another view of the Face, and mark well what Shadows are too light, or too deep, and endeavour to reduce each Shadow to its due Perfection; then ſhadow the entrance into the Ear, and draw the Lines of the Eyelids the deepneſs of the Eyebrows, and all the moſt eminent Notes and Marks in the Face, doing them with a very curious ſharp Pencil, and then heighten the Hair, deepening it, as it appears in the Life, caſting over the ground ſome looſe Hairs, which will look very pleaſant, and make the Picture ſeem to ſtand at ſome diſtance from the Curtain.

In the ſhadowing your Linnen, which ought to be very curious, uſe Black, White, a little Yellow, and a ſmall quantity of Biue. The Black being deepned with Ivory-black; to which add a ſmall quantity of Lake, or Indico: And thus much for the ſecond Operation, from whence I proceed to the third and laſt.

The third Operation, &c. In this, only obſerve to give ſtrong touches, where you ſee Cauſe, or find any Defect, taking more perfect Obſervations for the rounding of the Face, which at this ſitting is better done than before, noting diligently whatever may conduce to Similitude, which is the principal in the Work; as Scars, Moles, caſt with the Eyes, Drawing the Mouth, &c.

In caſe of Ornaments, as Garments, &c. the ground being laid with Biſſe, then the deepening muſt be Lake and Indico, the Lightning White, very fine, faint and fair; and in the extream light places, let what has been ſaid of the Blue Drapery ſuffice, as may be underſtood of all other Colours; and for the greater Ornament,

you

you may mix the Light with Gold or Silver, &c.

If the Body is to be in Armour, lay liquid Silver for your ground, and when it is well dried and burniſhed, ſhadow it with Silver, Umber, and Indico, and work the ſhadow upon the Silver, as the Life directs, &c.

For Gold Armour, lay liquid Gold for the ground, and ſhadow it with *Engliſh* Oker, Lake, and a mixture of Gold.

For Pearls, or that Colour, your ground muſt be Indico and White, and the ſhadow Pink and Black.

For Diamonds, lay a ground of liquid Silver deepned with Ivory and Cherry-ſtone Black. And thus much for the Face, Body, &c. as to the laying in Water Colour, and the next that preſent themſelves are *Landskips*.

Directions for laying Landskips, &c. In this caſe always begin with the Sun-beams and Sky, the lighteſt part firſt, and then the Yellow, which muſt be compoſed of Maſticote and White; the next your blue Skies with Smalt only, leaving no part of your ground at firſt uncovered; but lay the Colours ſmooth all over, working the Sky downward toward the Horizon, ſtill ſuffering it to grow faint, &c. as it draws nearer the Earth; and work the tops of Mountains and other Objects very remote, ſo faint that they may appear as loſt in the Air, and as for your loweſt and neareſt ground, it muſt be an Earth Colour of dark Brown, inclining a little to Yellowiſh and Green, as the matter requires, and the next a lighter Green, and ſo ſucceſſively, as they loſe in their diſtance, you muſt abate their Colour; nor muſt you make any thing you ſee at a great diſtance perfect or abſolutely what it really is, becauſe it is altogether conjecture; you cannot abſolutely diſcern it, but expreſs it in Colours weakly and faintly, as your Eye judges it may be. And ever obſerve in this caſe to place the light againſt the dark; and ſo conſequently the contrary, which is an excellent way to extend the Proſpect far off, yet do it ſo as the Shadows may loſe in their Proportion of diſtance, by degrees, their Force, as they remove from the Eye; obſerving further, that the ſtrongeſt Shadow muſt ever be neareſt.

And

And thus much may ſuffice for Limning in Water Colours, which if duly obſerved and practiſed, will wonderfully help the Learner; And in this manner you may paint upon Glaſs, by laying on the faireſt Colours, if it appear thro' the Glaſs firſt; but if otherwiſe, lay firſt a ground, and eſpecially upon Copper.

CHAP. X.

Directions for the moſt Curious Painting, or Limning in Oil, with the various Colours and Materials required on that occaſion, with their manner of preparing and ordering; as alſo Inſtructions to Paint to the Life, &c. wonderfully pleaſing, and much profitable to be known, as well by the Gentry as thoſe that intend it for their Profeſſion.

AS this Noble Science in all Ages has been held in much Eſteem and Veneration among Men, it is now more eſpecially coveted to be known and practiced by either Sex; wherefore for the better Inſtruction, eſpecially of the Learner, I have thought fit to lay down the following plain and eaſie Rules, which being well obſerved and practiced, may in time bring him to be a great Maſter in the Science. But firſt, of the Colours to be uſed on this occaſion, without knowing which, the reſt may prove ineffectual.

The Blacks are Lamp-black, Sea-coal-black, Charcoal-black, Ivory-black, and Earth of Collen. The White, white Lead only. The Greens, Verdigreaſe, Terra-vert, and Verditer. The Yellows are Pink, Maſticote, Orpiment, Spruce Oker, Engliſh Oker. The Blues are Biſſe, Smalt, Indico, and Ultramarine. The Reds are Vermilion, red Lead, Indian Red, Lake and Ornotto. The Colours indifferent are Spaniſh-Brown, burnt Spruce, and Umber.

Theſe are the principal Colours to be laid in Oil, and muſt for the greateſt part of them be ground upon your flat

flat Stone with a Muller, with Linſeed-Oil; tho' as for Ivory, Spruce, Oker and Umber, they muſt be burnt before they are ground; and as for Maſticote, Ultramarine, Verditer, Vermilion, Lamp-black, Smalt and Orpiment, you may temper them upon your Pallet with Oil, ſaving your ſelf the labour of grinding, &c. and as for thoſe that are to be burnt, you muſt perform it in a Crucible, and tho' Linſeed-Oil be common to all, yet in caſe with your white Lead you are to lay Linnen, you muſt mix it with Oil of Wallnuts, by reaſon the other will in a ſhort time turn yellowiſh.

The next thing you are to take care of, is to have good Pencils of all ſizes, a Pallet, or Board, to lay your Colours on, whilſt you are uſing them, and an Eyſil to lay your Cloth upon, or againſt, and a ſtraining Frame, to which it muſt be nailed, and you muſt further have a Stay or Molſtick, which is made of Brazile, or ſuch Wood as will not eaſily bend, about a yard long, at one end of which tie a Ball of Cotton in a piece of Leather; ſo that holding it in your left Hand againſt the Work, you may ſupport your right Arm with it, whilſt you are Working; and being thus furniſhed, you may proceed to the Work, &c. And firſt of the Complexion.

For a Fair Complexion. Take a ſmall quantity of White, and twice as much Vermilion and Lake, temper theſe with the flat of a Knifes Blade upon your Pallet, or Handboard, and uſe it for the deepeſt Carnation of the Face, adding moreover to a ſmall part of it more White, and reſerve that for a lighter Carnation. And yet another part being reſerved, add more White to it, till it come to the lighteſt Colour in the Face: And then proceed to prepare the faint Shadows, and in doing it,

Take Smalt, and mix it with a little White, which may conveniently ſerve for the Eyes; then laying aſide the greateſt quantity, add to the reſt a little Pink, and theſe well tempered, will ſerve for the faint Greeniſh Shadow in the Face; then proceed to prepare your deep Shadows: And in order to it, take Lake, Pink, and Ivory-black, a like quantity of each, and temper them together. And if the Face of the Party, or the Figure

you

you are to copy require redder Shadows than what you have tempered, add more Lake; if Yellower, more Pink; if Bluer or Greyer, then add more Black.

Thus having prepared your Pallet with Colours ſuitable to a fair Face, conſider again, in caſe the Complexion be more brown or ſwarthy, you may temper the Colours as before, putting moreover a little quantity of burnt Oker amongſt your Lake, Vermilion and White, that it may look ſomewhat tawny amongſt your heightned Colours. In this caſe temper a little Oker, ſo much only as will juſt turn it, and for your very deep and very faint Shadows, you may uſe the ſame as for the former Complexion.

For a tawny Complexion uſe the ſame in the general, as before, only let the Shadows be prepared of burnt Oker and Umber.

For an abſolute Black Complexion, your dark Shadow muſt be as the foregoing; but as for your heightnings, you muſt take burnt Oker, Lake, with Black and White, yet but a little of the later muſt be put in at firſt, that you may the better work it up by degrees. And note, that the ſingle Colours laid at firſt upon your Pallet well tempered, according to the foregoing Directions, ſerve for Shadows for all Complexions.

CHAP. XI.

What Pencils are to be uſed in Painting a Face, and how to diſpoſe them. Directions to Paint a Face in Oil Colour, and what Mixtures are requiſite for Garments, &c.

YOUR Pencils, how ſmall ſoever, ought to have a Stick about 9 inches long, cut, or ſharpned at the fartheſt end into a point, and when you are to Draw any Face, lay together two Ducks-Quill Fitch-Pencils, two Gooſe-Quills fitch'd, two pointed, and two briſtled, the Pairs being exactly alike; and when you are to uſe them, having your Pallet in readineſs upon your Thumb,

Thumb, take them in your right Hand, and put the ends of your Sticks into your left Hand, keeping when you work the hairy ends at a diſtance, leſt the Colours intermingle, and ſo proceed to your Work, *viz.* Your Cloth being ready primed, and ſtrained upon your Frame, ſcrape it over with a Knifes edge, not very ſharp, to take off the knots, if any appear, and ſo ſet your Frame and Cloth upon your Eyſel a convenient height, ſo that you ſitting upon a Stool level with the Party or Copy you draw, may the better have the Picture equal, *&c.* placing it according to your Light, as I have directed in Water-Limning; then with a piece of Chalk draw the Proportion of the Face upon the Cloth, making the place for the Eyes, Noſe, Mouth, Ears, Hair, *&c.* Then take a Swans-Quill-pointed Pencil, and begin with ſome of the lighteſt Colours in the lighteſt part of the Face, (the Cloth before being primed, or ground laid) as the heightning of the Forehead, Cheekbone, Noſe, *&c.* on the lighteſt ſide, and when you have done that, next proceed to the mean Parts, *viz.* thoſe not altogether ſo light, as the Cheekbone of the fore-ſhortning, or dark-ſide; the Chin and upper Lip, and by degrees come to the reddeſt part of all.

Having thus far proceeded, lay the greeniſh faint Shadows in places convenient, and where you ſee cauſe to moderate the harder Shadows; but have eſpecial regard not to place the Green where the Red ſhould be: And ſo all the faint and light beginnings being put on, take a Ducks-Quill fitch'd, and a Gooſe-Quill-pointed Pencil, and begin at the Eyes to ſhadow with Lake, and trace out thoſe parts of the Face therewith that require it, as the Eyes, Noſe, Mouth, the compaſs of the Ears, *&c.* and do this before you lay on any Colour, lightly wiping it over with a Linnen Rag, to prevent the overcoming of other Colours.

Having now put in all the Colours dark and light, take a large fitched Pencil, and ſweeten the Colours: That is, go over the ſeveral Shadows with a clean ſoft Pencil, which by a gentle and dexterous handling will force or drive the Colours into each other, ſo that they

they will repreſent the laying on at once, and not at ſeveral times. This being done, begin again with your clean Pencils of ſuch bigneſs as the Work requires; then the Party ſitting in the Poſture as before, take a curious view, and ſee what defects you find in the Work, and amend them; after that proceed to heighten or deepen your Shadows, as the Nature of the Piece requires, and if a Beard or Hair be required, take a Gooſe-Quill-briſtle Pencil, and put in the Hair about the Face, and rub in the greater Briſtle, heightning it up with your Gooſe-Quill Pencil, and ſo your Work is done.

If Garments are required, called by Artiſts Drapery, for a Red Garment, lay dead Colour with Vermilion, glaze it over with Lake, and heighten it with White. For Scarlet, Vermilion muſt be the lighteſt, deepened with Lake or Indian Red. For a Crimſon-Velvet, lay burnt Oker, Vermilion, or Indian Red, glaze it with Lake, and touch it up with Vermilion. For a ſad Red, heighten Indian Red with White, and let all your deepenings be with Black, Pink, and Lake well tempered. For Green Garments, heighten Biſſe and Pink with Maſticote, and deepen it with Indico and Pink. For Green Velvet, lay the dead Colour with White, and a little Lamp-black, glaze it with Verdigreaſe, deepen it with Indico and Pink, and heighten it with Pink and White. For Yellow, take Yellow Oker, Maſticote and Umber, lay the dead Colour with Maſticote and White in the higheſt Places, and with White and Oker in the meaneſt, and with Umber in the darkeſt, glazing it when dry with Pink.

For Blue Garments, take Indico and White, laying firſt the White in its due Places; and then your mean Colour, *viz.* Indico and White well tempered in their due places; then deepen it with Indico, and glaze it with Ultramarine when dry, *&c.*

For Purple Garments, take Oil, Smalt tempered with Lake, and white Lead, and heighten it with the later.

For Black Garments, let the dead Colour be Lamp-black, and a little Verdigreaſe, and when it is dry, go

over

over it with Ivory-black, and having heightned it with White, go over it with Ivory-black and Verdigreaſe.

For Orange-colour Garments, mix red Lead and Lake, laying the lighteſt parts with red Lead and White; the mean parts with only red Lead, and the deeper with Lake; and if need requires, you may heighten it with White.

For Cloth-coloured Garments; for the ground, take Umber and White, and for the deeper Shadows Umber and Black, and for the mean Umber and Oker, and whiten it with Oker and White. And thus much may ſuffice for Limning and Painting of theſe kinds.

CHAP. XII.

The Curious and Myſterious Art of Etching and Engraving in Gold, Silver, Copper, Steel, &c. diſplayed and made manifeſt in eaſie and plain Rules and Methods, by which an Unexperienc'd Perſon may attain to the Knowledge thereof, and the Expert be wonderfully improved, &c.

TO introduce this Curious Art, I think it convenient to begin with Etching, the better to give a Light into what ſucceeds, &c. and firſt of the Ground.

In this caſe, procure three parts of Virgins-Wax, and one of Aſphaltum, one part of Maſtick, and one part of clarified Roſin, put all but the Wax, putting that into a new glazed Pipkin or Pan, and let it boil over a gentle Fire; at what time put the other Ingredients to it, which being melted, pour it out into fair cold Water, keeping back the dregs; and when it is cold, work it into a Ball; tie it then in a Rag ſo cloſe, that no dregs may come thro', and uſe it upon your Copper, as you have occaſion.

In preparing your Copper, obſerve that it be well poliſhed, not lying higher in one place than another, nor no where uneven, and if you eſpy any ſpecks or diſorders in it, coal it over with a well burnt Char-coal and fair

fair Water, and ſet it aſlope to dry; which done, ſcrap ſome very dry Chalk or Whiting upon it, and rub it over with a Woollen Rag, not touching the Face o the Plate with your Finger till the Ground be laid which muſt be done in this manner, *viz.*

Put lighted Small-coal into a Chafing-diſh, and la the Plate on the wrong ſide over it, that a gentl breathing of heat may come through; then take you Ground in the Rag, and rub it gently up and down th Copper, till it coming thro' the covering, by reaſon o the heat, may ſufficiently cover the Plate, not too thic nor too thin; and then whilſt it is warm, take a Duck Feather, and ſmooth it to an exact evenneſs, but be ware the Copper be not too hot, for if it ſoak, the moi ſture of the Ground is gone; and then in Etching it will crack and fly up; and when it is according to your mind, ſuffer the Plate to cool; then grind a piece o white Lead in Gum-water, not very ſtiff, and make the white of convenient ſtiffneſs, to waſh over the firſt Ground of the Plate, with a Bruſh dipped therein, til you perceive it every way ſmooth, going over it with another Bruſh of ſoft Furs, and ſo let it dry.

The Ground thus laid, take your Draught, after which you are to work, and ſcrape on the backſide of it ſome red Chalk, moving it all over, and ſcrape over that ſome Small-coal, very fine, ſuffering it to mingle with the Chalk; and then with a Pencil, or Hand-bruſh rub it up and down till it be ſmooth and even, and ſo place your deſign upon the Plate, and with a blunt Needle, or Steel Point, draw over the out-ſtroaks; and then you muſt have ſeveral Needles, according to the ſmallneſs and largeneſs of your ſtroaks in the Copy, and with them in a Tin-Pencil, Frame or Stick, according as bluntneſs or ſharpneſs requires, take out all the black ſtroaks, preſſing ſo hard, that the Needles may paſs thro' the Ground, and make ſome ſmall impreſſion on the Copper, ever obſerving when you lay by your Plate, to wrap it up in a Paper to prevent ſcratches, or the Air ſpoiling the Ground, wiping away as you work the Ground the Needles brake up, with a light

Pencil,

Pencil, not ſuffering the Ground to lie too long on the Plate before you finiſh, for the Air drawing out the moiſture of the Ground, the Etching will appear broad and deep, working off black and unſeemly; or when ſometimes you ſuppoſe it eaten ſufficiently, you will find it defective in many places, and in frofty Weather you muſt wrap the Plate as well in a Blanket as in a Paper, for if the Froſt take the Copper, the Ground will ſtart from it, and ſo the Aqua-fortis will ſpread under it, and keep no certain form.

Having obſerved theſe directions, take green Wax, and melt it in a new Pan or Pipkin, and with a Pencil cover the edges of the Copper, and ſtick the Wax round about like a Wall, to keep in the Aqua-fortis; that done, and it being firmly ſtuck on, take the third part of an ounce of Aqua-fortis, and break it with other Water of the ſame kind, that has been once or twice uſed, taking at leaſt two parts of the old to one part of new; and in caſe you have no old Aqua-fortis, then inſtead of it, uſe ſtrong Whitewine Vinegar as a mixture; and for ſuch Figures, or things as you would have lie fine and ſweet, you muſt pour out your Aqua-fortis into ſome Earthen Veſſel, and then waſh off what remains with fair Water, and ſuffer it to dry; then melt Candle-greaſe, with a little Ground, and with a Pencil cover the Places you would have lie faint; then pour on again your Aqua-fortis; and ſo continue to do as often as you can conceive it convenient; then melt off the Ground over a gentle Fire, and with a clean Rag wipe it off, and you will have the perfect impreſſion of the Copy on the Plate, which you may work off at the rowling Preſs to ſerve your occaſions. And thus you may do upon any Metal the Water will take, &c.

From Etching, I proceed to the Art of Engraving. And he that would be expert herein, muſt have a regard to true Drawing; wherefore, I would adviſe the unskilful well to conſider what I have laid down of that kind, and ſo provide himſelf with Materials for the performance of this Curious Art.

In the firſt place, be ſure to chuſe a good Oil-ſtone

free

free from Pin-holes or Flaws, not too hard nor too soft and therefore the better to furnish your self aright, you must consult in what the stress of your business will lie: for if you intend Picture or Letter Work, accounted more curious than Marks, or Arms used by Goldsmiths and Pewterers, you must have your Gravers accordingly shaped and tempered; for Goldsmiths, &c. Gravers are frequently crooked, the better to come at hollow places, &c. but for Copper, or any Plate, that may be easily come at, the strait Gravers are ever held the best: and if you suspect their goodness, try whether or no they are File proof; and if so, they will fit your purpose: tho' at first, by reason of their temper, they may appear brittle, and sometimes break short, yet being ground out, they will still grow better and better, and come in a little time to an excellent temper.

As for the forms of Gravers, and their use, the square one makes a broad shadow Stroak or Hatch, and that which is in form of a Lozenge, a narrow deep one, the one being appropriated to large, and the other to fine Stroaks, yet if your Work be curious, a middle-size between these will the better accommodate you, which will render your Stroaks or Hatches more graceful, and yet carry with them sufficient Force and Vigour.

In case of whetting your Gravers, which is frequently required, pour a little fine Olive-Oil upon your Stone, and laying that side which you intend shall cut the Copper, flat upon it; whet it very flat and even, and to that purpose, carry your hand very steady, continuing an equal Strength, and placing your fore-Finger firm upon the contrary side, so that you may have more power to guide it with exactness; then turn the unwhetted side, and use it in the same form and manner, that there may be a very sharp edge; then turning uppermost that edge, which in the former manner you have whetted, setting the end of your Graver obliquely upon the Stone, bear your Hand with an exact evenness, to the intent it may prove very flat and sloping, in the form of a Lozenge; and in this you must take great care; for if it be not well and rightly whetted, you can never Grave well.

Ob-

Obſerve when you have a Graver whoſe Handle is a round or oval Knob, if you would prevent it from running into the Copper, or the other Metal you grave, further than is convenient, then muſt you cut off that part of the Knob which lies in a Line with the point of the Graver, and make it as level as you can with the Point; nor then will it hinder your Hand from carrying an even Stroak, which otherwiſe it will do, eſpecially in working a great Plate, by bearing too much upon the Copper: and in holding it, place the Knob-ſide, or that part of the Ball not cut off in the hollow of your Hand, extending your Fore-finger towards the point, and laying it oppoſite to the edge that is to cut, and place your other Fingers on the one ſide of the Handle, and your Thumb on the other ſide of the Graver, in ſuch a manner, as with eaſe you may guide it flat and parallel with the Plate, being ever very careful that your Fingers do not interpoſe between the Plate and Graver, leſt it hinder you in carrying it level with the Plate, by hindering you from making your Stroaks with freedom and neatneſs.

Further, to fix you in this affair, you muſt have a ſtrong round Cuſhion of Leather filled with fine Sand, about half a foot over, and four inches in the diameter, riſing a little in the middle, and ſloping towards the brims, but not much, and this muſt be to lay your Plate on, that you may turn it at leiſure; and if you are to make ſtreight Stroaks, hold your Graver in a direct Line; or in caſe you would have your Stroaks broader, and deeper in one place than in another, you muſt lay more or leſs ſtreſs, as you ſee occaſion, obſerving in all ſtreight Stroaks to hold your Plate ſteady and firm upon the Cuſhion and the Table, or Bank on which it ſtands well fixed; but in crooked and winding Stroaks you muſt hold your Hand and Graver ſtedfaſt, and only turn your Plate, or otherways you cannot command your Hand to that neatneſs as in many caſes is required, obſerving at the ſame time, for the more ſteddineſs to keep your Elbow fixed upon the Table, and your Eye on the Plate, ſcraping your Work as you go with

the edge of a Burniſher, to take off the roughneſs; yet be careful that you make no ſcratches, and the better to ſee what you have done, rub the place over with a piece of black Felt dipped in Oil; and if any ſcratches appear, with your Burniſher rub them out; and if any Stroaks be too hard, in the ſame manner you may make them fainter. And in caſe your Graver ſhould happen to appear very hard, which by its exceſſive brittleneſs in often breaking is known, lay it upon a burning Charcoal till it grow yellow; and then dip it in Water, and it will by often ſo doing render it of a better temper, but if it be blunt in a ſhort time cutting, then it is too ſoft, and you muſt heat it in the Fire, and dip it in Lime-juice, or Vinegar; and thus much for the management of the Tools, &c. the which by a little Practice will ſoon grow natural.

Another material thing in this Art is to be conſider'd, which is, take the Impreſſion you are to cut or grave upon your Plate; and in this caſe heat your Plate over a Fire of Small-coal, and having a piece of fine Bees-Wax ty'd up in a fine Rag, worked like a Ball, that it may ſit cloſe, wipe the Plate over with it, when it is hot enough, very lightly, till you perceive it is covered with Wax, very thin and even, laying it with a Feather, in which at firſt you may find ſome difficulty, but Uſe will render it eaſie; and in this caſe, if you are to imitate an exact Copy, it muſt be ſo ordered, that it may ſtand the contrary way on the Plate; and therefore in conſideration hereof, your beſt way will be to track it over with a black Lead Pencil, eſpecially in caſe of a very old Picture, which being done, take a piece of poliſhed Ivory, and placing your Picture exactly on your Plate, the Print ſide downward, rub it lightly, and you will perceive the exact proportion of the Print remaining upon the Wax or Plate; then take a ſteel point and go over each particular Limb, &c. eſpecially in the out Stroaks, and there will be but little difficulty to mark the Shadows which lie before you as you engrave the Work, and the readier it will be, if ſo you note how far your Shadows ſhould be dark, and how far light, with your black Lead, before you rub it off.

The

The carrying of the Hand in this kind will at firſt ſeem difficult, as to the depth of your Stroaks; but in general, obſerve ever to carry your Hand with ſuch a ſlight, that you may end with the ſame faintneſs or darkneſs you begin: And in caſe one part require more deepneſs and blackneſs than another, you muſt do that by degrees; and that you may the more expertly do it, obſerve that your Stroaks be not too cloſe, nor too wide; and therefore to bring your hand in the better, practice at firſt by ſuch Prints as are but looſely ſhadow'd, leſt by attempting to imitate thoſe more dark and cloſe, you happen to be puzzled where to begin, and where to end, but Practice will inform you.

As for Letters: In caſe of Copies, the Letters muſt be gone over with ungummed Ink, or with black Lead, and laid on the Plate when waxed as the former, unleſs you are ſo dexterous at Writing that you can draw them by hand, or with a Steel point on the Plate in true Cut.

But if a Map, or other Mathematical Inſtrument, be required, every Circle or Perpendicular muſt be drawn over as before, or you cannot exactly imitate. But in caſe of a Face or Coat of Arms, or Inſtruments not to be printed, then you may black over the backſide, as in Etching, but you muſt uſe for engraving a Wax ground.

CHAP. XIII.

The Myſtery of cutting in Wood, laying Gold or Silver, ſolid or liquid, preparing Colours for the painting of Pictures, or Prints; refreſhing old Paintings or Pictures; colouring Maps, Buildings, Landskips, and many other curious things.

As for Cutting in Wood, in relation to Pictures or the like.

YOU muſt prepare your Wood in the manner of a Plate, tho' an inch thick, or according as the deſign requires, either Box or Pear-tree, rendering it by plaining as ſmooth and level as a piece of Paper; which done, having a draught of your deſign, you muſt rub the

Wood gently over with a ground Paſte made of the fineſt Flower; and then fix your Draught, or Copy upon it; when ſuffering it to dry, rub the backſide of the Paper which muſt be uppermoſt, with your wet Finger, till you crumble it off ſo thin, that the Print plainly appears upon the Wood, as if it had been painted or drawn thereon with a Pen or Pencil.

Having thus prepared your Wood, if it be ſmall, faſten it up with Coins, that it move not, unleſs there be occaſion, or as the Stroaks require, and then having a fine ſmall Knife in the nature of a Pen-knife, but much leſs and thinner, eſpecially for the fine Stroaks, cut out all the white Stroaks and Ground, and ſuffer the black ones to ſtand, ſharpening the fine Stroaks, and bringing them to an edge that they may not print black or dull; and above all, be ſure to do it with ſo light and curious a Hand that you break none of them; for if ſo, you much deface and injure the Work, they not being to be repaired; and further obſerve to leave a good Foundation to the Stroaks, tho' never ſo fine at the top, leaſt by the force of the Preſs they break in working.

You may have your Pattern or Advice, if it be new, drawn upon the Wood with black or red Lead, tho' the former way is the ſecureſt from being rubbed out, or injured, *&c.*

To write or guild with Gold and Silver, an eaſie, and curious method, &c. If you would have fair Letters appear in Gold or Silver, take Gum-Armoniack, and grind it with a little Juice of Garlick, and put thereto a few drops of the weak Water of Gum-Arabick, and ſo make it to the thickneſs of Ink; that you may conveniently write with it, and ſo write or draw what you think convenient, and ſuffer it to dry a little, but not too much, leſt it take not the Gold or Silver; nor too little, leſt it drown them. Then lay your Gold or Silver in Leaf upon a Leather-Cuſhion, being a piece of Calves-skin ſtuffed with the rough ſide outwards; and ſo with a ſharp Knife cut it into what proportion you will, ſuitable to what you have written, and taking it up with a looſe piece of Cotton-Wool, on which you have breathed, cover with it the

place

place intended, preſſing it down hard, and where the Gum-water is, it will take it; then bruſh away with other Cotton what it has not taken, and being dry, burniſh it with a piece of poliſhed Ivory, and it will appear very ſplendid.

To write or guild with liquid Gold or Silver, &c. Take ſhell Gold, which is made of the ragged edges, or cuttings of leaf Gold; and when you are deſirous to uſe it, put it in a little fair Water, tempering it up with a clean Pencil, and lay it on with a Pen or Pencil in what form you pleaſe, either by way of Writing or Guilding; and when it is dry, rub it over with a Dog's, Calf's, or Horſes fore-Tooth, and it will be very ſhining and pleaſant. And of this, as of the former, you may lay on more or leſs, either for the guilding Picture Frames, Coaches, Rooms, or the like. As for lacquering, it only conſiſts of carrying a Pencil dipped in rectified Spirits over leaf Silver, which changes it to a Gold Colour.

How to prepare Colours to colour printed Pictures, and thereby render them Beautiful. For a curious Violet Colour, take Turnſole, being a Dye infuſed into a piece of Linnen Rag, heat it in Vinegar, and it will give you the Colour deſired, after which diſſolve in it ſome Gum-Arabick, and uſe it as you ſee fit.

For a curious Yellow, take Gum-bonge, and diſſolve it in fair Spring-water over a gentle Fire.

To make a tranſparent Red, take Brazile, grind it, and heat it over a Fire with ſmall Beer and Vinegar, put in a little Powder of Allom and Gum-Arabick, and ſuffer it to boil till it taſte ſtrong, &c.

For a tranſparent Purple Colour, grind Log-wood, and boil it in all reſpects as the former.

For a curious Blue, take fine Litmos, and cut into ſmall pieces, lay it for the ſpace of twenty four hours in a weak Lake Gum-water; to make which you have been before directed, and it will anſwer your Expectations.

To make a curious Green, take the Juice of Rue, and a little Verdigreaſe.

For a light Green, take *Sap-green flower de Biſs*, or Tawny-green, and ſteep them in fair Water.

To ſhadow Greens, ſteep Indico and yellow Berries.

To ſhadow Blues, take Litmos and Indico, ſteeping them in the Lees of Soap-aſhes, and uſe them with Gum-water.

To make a good Brown, take Ceruſe, red Lead, Pink, and Engliſh Oker, mixing them with Gum-water.

For an Orange-colour, take red Lead, and yellow Berries, and mix them with Gum-water.

For a curious fleſh Colour, take white Lead, red Lead, and Lake with Gum-water.

To make a Colour for precious Stones, take Verdigreaſe and Varniſh for an Emerald, Florence Lake for a Ruby, and Ultramarine for Saphire.

How to Colour Maps, and what is to be obſerved therein. In this caſe as well as in other printed Pictures, 'tis no more than to ſet them out in their proper Colours, which you muſt accordingly conſider, as the nature of the thing requires, it being impoſſible to direct in particulars: however obſerve, the Water muſt be a faint Blue, Sky ſomewhat deeper, Trees Green, Houſes in Maps are uſually Red, and Ways Yellow and Green: And to theſe and the reſt ſuit any Water Colour you think ſuitable mentioned in this Book.

Colouring for Landskips, and Buildings at large, very proper. In Landskips, for the ſaddeſt Hills, uſe burnt Umber; for the lighteſt, put ſome Yellow to it; and for other Hills, lay Copper-green thickned on the Fire, or in the Sun; and for thoſe further off, mix with it ſome yellow Berries, and let the fourth part be done with green Verditer, and the furtheſt and fainteſt Places with blue Biſſe; for the lighteſt Places, uſe White, and ſhadow it with Blue; as for the Highways, do them with white and red Lead, uſing for variety yellow Oker, ſhadowing it with burnt Umber; and it may likewiſe be uſed for ſandy Rocks and Hills; and as for other Rocks, you may lay them with ſeveral Colours; but at a diſtance they muſt appear Blue, as in the Air; as for the Water, do it with black Verditer, and white ſhadowed with Green, and with blue Verditer, when the Banks caſt a green ſhadow upon the Water; but when the Water is dark in the Shadows, ſhadow it with Indico, blue Verditer and green, &c.

How

How to Colour Building, &c. In colouring Buildings, you muſt uſe much variety, the better to ſet them off; yet not ſo as they may appear extravagantly adorned, or contrary to the uſe of this kind; but for Walls and Conduits uſe a mixture of White and Black, as likewiſe for other Materials, but if a Brick-houſe, uſe red Lead and white, and where the Houſes ſtand thick together, there uſe ſundry Colours ſuitable to the occaſion.

To cleanſe old Pictures, and render them fair and pleaſing. Take Wood-Aſhes, the whiteſt that may be had, ſift them thro' a fine Lawn-ſieve, and with a Sponge and fair Water waſh the Picture gently over, not rubbing it hard, leaſt you impair the Shadows, which being done, and the Picture dry, take diſtilled Varniſh and rub it thin and gently over, and it will create a laſting Freſhneſs; or for want of this, you may do it with the whites of Eggs exceeding well beaten, or with Gum-water: But note, the Pictures to be thus uſed, muſt be ſuch as are laid in Water-colour-Oil.

CHAP. XIV.

Inſtructions for reſtoring Tapeſtry Hangings, Carpets, or Turkey-Chairs that are faded or decay'd, to their lively Colour; to prepare Flock Cloth for Hangings; Spaniſh white, Size, Allum-water and Gum-Arabick-water; how to make them; as alſo to thicken Cloth for Skreens, &c.

To refreſh Hangings, or Tapeſtry, Carpets, or Chairs.

BEat the Duſt out of them in a dry day as clean as may be; then rub them over well with a dry Bruſh, and make a good Lather of Caſtle or Cake Soap, and rub them well over with a hard Bruſh; then take fair Water, and with it waſh off the froth, and make a Water with Allom, and waſh them over with it, and you will find, when dry, moſt of the Colours reſtored in a

ſhort time; and thoſe that are yet too faint, you muſt touch up with a Pencil dipped in ſuitable Colours; and indeed you may run over the whole piece in the ſame manner with Water-Colours mixed with weak Gum-water, and it will cauſe it, if well done, to look at a diſtance like new.

To make Flock Cloth Hangings, &c. To do this, take a courſe Canvas, ſpread it even upon a Floor, or Table, then take Flocks, or ſhreads of Woollen, grind them as ſmall as Duſt, and having ſized over your Cloth with a good ſtrong Size, ſift whilſt it is wet the Flocks thro' a Sieve very fine, and having done it even in all places, run a Roller of Wood or Iron over the piece, to preſs them down cloſe, and ſo ſuffer them to dry in the ſhade, leſt the Sun or Fire parch, and make them crack, and when dry, bruſh them lightly over with Allom water; and ſo draw your deſign with black and red Lead, Charcoal-black, or any other Colour you fancy, and it will at a diſtance look like Tapeſtry, and be very laſting in a Room where no great Fires are made.

How to thicken Linnen Cloth for Skreens, Bed-teaſters, and the like. Grind Whiting with Size, and to prevent its cracking, add a little Honey to it; then take a ſoft and ſmooth Bruſh, and lay it upon the Cloth, and ſo do two or three times, ſuffering it the mean while to dry between layings on, and for the laſt laying, ſmooth it over with *Spaniſh* White laid with Linſeed Oil; the Oil being firſt heated, and mixed with a ſmall quantity of the Litharge of Gold, the better to endure the Weather, and ſo it will be laſting.

How to make Spaniſh *White.* Take fine Chalk, with a tenth part of Allom, grind them with fair Water till very ſoft, and then bring them to a thickneſs, and make them up into Balls, lay them to dry leaſurely; and then heat them well in the Fire, and ſo uſe them.

To make a very good Size uſeful upon ſundry occaſions, &c. Take Glue a pound, ſteep it in four gallons of Water, till it be diſſolved; then take a pound of the ſhreads, or cuttings of Gloves, or other the like Leather, and boil them in the Water wherein the Glue has been diſſolved over

over a gentle Fire, till it feel very clammy between your Fingers, and when that is done, ſtrain the liquid part thro' a Sieve, and keep it for your uſe.

To make Allom-water the beſt way. Take a pound of Allom, bruiſe it, and put it into two gallons of Water, adding a ſmall piece of Gum-Arabick; and having ſcummed it after a gentle heating from the Froth or Scurf, ſtrain the Water, and keep it for your uſe; and eſpecially to waſh over printed Pictures lightly before you Paint or Colour them, by which means, they being afterwards ſuffered to dry, the Colour will be prevented from ſinking, or ſoaking in unſeemly.

To make Gum-Arabick-water for all occaſions. Take of the tranſparent or white Gum two ounces, half an ounce of Allom, and two quarts of Spring-water, diſſolve the former in the later over a gentle Fire, ſcum it, and take away the droſs, and ſo uſe it with Colours, or in making Ink, or the like; and if you perceive it too ſtrong, you muſt put more Water, but if too weak, then more Gum, taking out the droſs as before.

To cure Piles. Take Ink-Galls, powder and ſift them fine, and mix Oil of Roſes with it to an Ointment, then anoint with it, and apply a Plaiſter ſpread over it of the ſame Ointment; its a ſafe and ſpeedy Cure. *Often proved.*

Another. Take Hogs Lard and Elder-buds, ſtampt and mixt well together, and anoint with it; lay a Plaiſter of the ſame to it: If your Piles break and bleed, apply a Plaiſter of Honey and Wheat Flower to them.

And thus much may ſuffice for the firſt Part of this Book, and paſt all peradventure prove uſeful to the Reader and Practitioner, in ſuch a manner, that I can ſcarcely believe he ever will, or at leaſt will never have cauſe to repent of, or repine at the Coſt and Labour ſo neceſſary a Treatiſe, fill'd with ſo much Variety, puts him to.

The End of the Firſt Part.

ART's Treaſury; or a profitable and pleaſing Invitation to the Lovers of Ingenuity: Contained in many Rare and Extraordinary Experiments and Inventions, *&c.*

CHAP. I.

Metals and Minerals, their Quality and Generation, from what they proceed, and how produc'd; the Art of tranſmuting and making Artificial Metals or Minerals, with other material Matters.

IN caſe of Minerals, and all things inanimate, concenter'd or contained in the Bowels of the Earth, it is convenient to reduce them to four kinds of Mixtures, *viz.* Metals, Stones, Earth, or Juices, Nature producing them with mixture and participation of each other. And here by Earth I mean the ſimple Element only, of which as the Philoſophers affirm, all ſublunary Bodies are compounded, and tho' the Earth, according to the Situation of Countries, and differences of Climes, differs in Scent, Colour and Taſte, yet that proceeds from a mixture of ſome other part, or effect of the former; the pure Elementary Earth being in all places one and the ſame; in which, and by the Operation of heat and moiſture, the others are generated; and as there are more or leſs of theſe, the Metals are finer or courſer: But to come nearer to our Purpoſe.

Gold is found in Grains or Sand, and Silver in Veins, and ſometimes twiſted and wreathed like Branches of a Vine; and at other times theſe Metals are found

found in Stones, with whoſe hardneſs they have incorporated themſelves, and being broken, are with fining Materials extracted. As for Gold, it is the moſt perfect of all inanimate Bodies, and has its Generation, as I have ſaid, from heat and moiſture in the Original; but of Parts ſo well contracted and compacted by Concoction, that it is in a manner incorruptible, it being beyond the Power of any Element to prejudice or deſtroy it; for the Fire of the moſt ſubtle and piercing Quality, conſuming all other Metals by long Application, renders Gold more Pure, nor can the Air, Water, or Earth diminiſh its Luſtre, but that it will again recover it; by which means it has deſerved the Eſtimation the World affords it; and is ſo ductil, that being expanded, an ounce of pure Gold will cover a place of twenty or thirty Feet ſquare.

Silver, as is hinted, carries a fineneſs next to Gold, wanting little more than the Colour to be brought to its perfection; wherefore thoſe that ſtrongly inveigh againſt the Tranſmutation of Metals, have been convinced that there is a poſſibility to turn Silver into Gold, by reaſon Fire and Artificial Concoctions may ſupply the defect, of which there have been many Experiments; and from the even mixture, good temperature and fineneſs of its Parts, it is not only ductil and maleable, but endures the Fire with little waſte; and admirable it is, that an ounce of fine Silver may be drawn out into a thouſand four hundred Yards, and that too for the moſt part without breaking; and all this extenſion may be guilded with ſix grains of Gold.

Copper is a Metal to the compoſition whereof a great quantity of Sulphur is required, and from a diſtemper'd heat in the mixture, the fiery heat proceeds, and being over burnt in its Compoſition, it is therefore leſs ſubject to Corruption, and is uſed about Engines of long continuance, becauſe it ruſteth not, and is found in Mineral Stones of divers Colours, tho' the moſt effectual Colour is Green or Blue; and ſo often is it engendred near Gold and Silver, that many times following a Vein of it, much Pure Gold, and oftner Silver has

has been found; and ſuch Veins of Copper as make a ſuperficial ſhew, are (upon being digged) richer the deeper you go, which is occaſioned by the moiſture; and many times Pure Silver is at the Bottom, &c.

Iron, tho' very common, which leſſens its eſteem, and may be termed the Wall and Bulwark of Kingdoms, the Safegnard of private Perſons, and the Handycraft Tradeſman's *unum neceſſarium*, for without it few Imployments can ſubſiſt. As for its extraordinary hardneſs from over-much earthy Parts, or fixed Sulphur in its Compoſition; not, but it has a proportion of Quick-Silver in it, ſo that it will not without a very violent heat be melted, nor will it break, but expand by force of Hammers, or other Violence, and receive an impreſſion by dilating it ſelf; and altho' it is cold and dry, yet by reaſon it is more porous than other Metals, it is of leſs weight; and conſequently ſubject to be conſumed by Ruſt.

Lead is frequently found in the Silver-Mines, and indeed as often by it ſelf, nor ſcarcely is there any Ore, but ſome quantity of Lead is found in its mixture, as being by the abundance of its humidity ſerviceable to it, and eſpecially in the melting of Gold and Silver, which cannot conveniently be done without the help of Lead; for in this caſe, by reaſon of its moiſture, it does eaſily evaporate, carrying with it whatever is not Gold or Silver, and in its weight comes neareſt to the former. *viz.* Gold, and in Colour to Silver, not being ſubject to Corruption as Iron.

Tin is begotten, or generated, by a groſſer ſort of indigeſted Quick-ſilver, tho' much finer than Lead, by which means it becomes more white and hard, tho' from the ill mixture of its Subſtance, it is accounted the Bane of Metals, making them brittle by never ſo ſmall a mixture; and the reaſon is, that by its incorporation it hinders the ductility, and diſorders its former equal temperature; except in Lead, with which it better agrees, by reaſon of the moiſture and ſoftneſs; ſo that being incorporated they become ductil and maleable.

Quick-

Quick-ſilver is of a liquid penetrating Subſtance, and greatly in uſe; eſpecially in refining Metals, agreeing with any ſort, abounding with much humidity; which gives it brightneſs and weight, and is held the principal of the Generation of Metals; nay, its very Subſtance is tranſmutable into Metals, enduring as well as thoſe that come out of the Mines, the trial of the Fire and Hammer.

There are ſundry Metals called Artificial Metals, made by mixture of Minerals. As from a mixture of Tin, Copper, and Braſs, Bell-metal is made; as alſo for pieces of Ordnance, and ſundry other uſes; and in this caſe, a pound of Tin muſt be put from four to eight pound of Copper, according as you expect it, britler or tougher.

Latten is made of Plates of Copper, put into Cruſibles, and covered with Powder of Jalamina, or a kind of half Mineral Sulphur ſtrewed over it, and upon that the Powder of beaten Glaſs, to which Fire being put, and the ſteem, or greateſt force of it kept in, it alters the Colour of the Copper to a braſſy quality, and adds in weight eight pound to the hundred.

Pewter, a mixture of Lead and Tin, and has ſometimes in it, for the better hardning and keeping it together, a ſmall quantity of Braſs, or Copper: And thus much for the Generation and Deſcription of Metals, which the Earth ſo abundantly produces for the uſe and benefit of Mankind.

For Piles. Take Hogs Lard and lay it on Sheet-Lead, and rub with a piece of Lead till it is black, and anoint with this, and lay a Plaiſter of it on, or anoint with Oil of Amber, or Oil of Amber and Oil of Almonds, a like quantity.

Piles to bring out. Boil ſome Water, put it boiling-hot into your Cloſe ſtool-pan; then put in a piece of Allom, and ſit over it, and ſit till it is cool. *Proved.*

Cold or Hoarſeneſs. Take half an ounce of Elicampane powdered, half an ounce of Liquoriſh Powder, and a quarter of a pound of Honey; mix them together, and take a little as big as a Pill, when you find the Cough coming.

CHAP.

CHAP II.

Inſtructions for ſoftening and hardning Metals and Minerals ſuitable to ſundry occaſions, as uſing in Tools, Engraving, &c. *The Art of Soddering, Guilding, Burniſhing, and the like upon Metals,* &c.

To ſoften Steel or Chryſtal.

TAke of unquenched Lime a pound, and as much of Soap-boilers Aſhes, and having made Ley therewith, put your Steel, or Chryſtal into it for the ſpace of twenty four hours, and it will eaſily be cut, or other ways ordered, *&c.*

To ſoften brittle and ſtubborn Iron. Take the Juice of Colts-foot and Hemlock, and when your Iron is hot, ſteep it therein, and it will become ductil, or you may do it by often quenching in Linſeed Oil.

How to make a Powder to ſoften Metals. Take your Metal and heat it well; then take ground, or beaten Glaſs, common Salt and Brimſtone, and ſprinkle them upon your Metal whilſt it is red hot, and afterward burn them off in the Fire.

To make Iron or Steel as ſoft as Copper, the better to Engrave upon, &c. Take Chalk and Allom, bruiſe them well together, and being wet with the juice of an Onion, dawb it over your Metal a Finger thick, and thruſt it into the Fire, ſuffering it to burn till it become clear, and it will anſwer your expectation.

To make Iron or Steel ſo ſoft, that you may twiſt it at Pleaſure. Take the Gall of an Ox, mix it with Oil of Turpentine and Urine, heat your Metal, and ſtrow upon it Powder of Vitriol; then waſh it over with the Materials before-mentioned, till it comes to be ſomewhat cool, and it will be very flexible.

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Inſtructions to harden ſoft Iron. Take the Concoction of Vervein, Houſleek-Juice, the juice of Hore-hound, Radiſh, or Rue, diſſolve in them ſome Allum-powder, and the buſineſs will be effected, if you anoint your Metal when hot with the liquid part.

To harden all manner of Iron-Tools or Inſtruments. Take the Leaves or Juice of Cinquefoile, or five-leaved Graſs, the Juice of a Limon, or Whitewine Vinegar, and dip the pieces of Metals or Tools in it when hot; and do ſo often, and you will find the advantage.

To make Iron as hard as Steel. Take the Juice of Roman-Nigrel, and Mouſe-Ear, Herbs ſo called, and ſtrike over the Metal being hot; and by this means Tools may be made of it that will cut Iron.

To harden Metal ſo that it ſhall not crack nor flaw, &c. Take Oil of Spike, and Mutton Suet, and dawb over the Metal hot; then plunge it ſuddenly in cold Water, and the buſineſs will be effected.

To harden Augres, Files, Chizels, Mattocks, &c. *for uſe.* Take the Juice of Radiſh, or Coleworts, mix it with Ley made of Soap-aſhes, heat it over the Fire, and when your Tools are well heated, or red-hot in the Fire, quench them in it.

To make Tools ſo hard, that they will cut Iron, Copper, &c. Take Salt-Peter and Coperas, ſtrew them in Powder upon the Tools when red hot, and then quench them in the diſtilled Water of Shell-Snails, and your expectation will be anſwered.

To Colour or Varniſh Tin, Copper, or the like Metals. Take half a pint of Linſeed-Oil, warm it over the Fire, and ſcum it; then put therein bruiſed Amber, and Alœpaticum, of each a quarter of an ounce, and ſuffer them to boil up to the thickneſs of an Ointment; after that, ſet them in a cloſe earthen Veſſel under ground for the ſpace of four days, and when you uſe it, ſtrike over your Metal with a Bruſh or Pencil, it being at the ſame time hot over a Pan of Small coal, and it will be of a curious Amber, or Golden Colour.

The manner of Guilding upon Metals, viz. Take Wine-ſtone, Verdigreaſe, and Sal-Armoniack, ſeeth them in White-

Whitewine, with ſome common Salt, ſtrike over the Metal indifferent warm with the liquid part, and ſuffering it to dry a little, take Water of Leaf Gold, and lay it on, which by the vertue of the waſhing will ſtick faſt, ſo that with a Burniſher of Ivory you may finiſh it in its proper Luſtre.

How to make a Water for the Guilding Metals. Take three pints of Spring-water, two pound of Roch-Allum, an ounce of Roman-Vitriol, and as much Verdigreaſe and Orpiment, boil and ſcum them; and then put in Water of Tartar and Bay-Salt, of each two ounces; and when the Ingredients are well diſſolved, and come to a thickneſs, ſtrike over your Metal therewith, dry it againſt the Fire, and burniſh it.

That Cats may not diſquiet Pigeons, or other Birds. Hang Branches of Rue, and lay them in the Windows and Preſages of the Pigeon houſe, *&c.* It will drive them away. *Wicker.*

How to Guild Iron or Steel with Quick-ſilver and Gold Foil.— Take Vitriol and Sal-Armoniack, of each an ounce, and of Allom two ounces, beat them fine, and boil them to a thickneſs in fair Water; add a dram of Verdigreaſe, and half an ounce of Sublimatum, and ſperce over your Metal with it; when having mixed your Gold and Quick-ſilver together, lay them on with a Leather Spatula as ſmooth and even as may be; then ſuffer the Varniſh to take it, and burniſh it over.

To make Iron, or the like, a curious Blue, or Steel Colour. Burniſh your Metal to a brightneſs, and take Cows-hoofs, burn them, and hold the Metal over the ſmother or ſmoak of it, and it will anſwer the end deſigned, *&c.*

To make Copper, &c. a Silver Colour. Take Bay-Salt, Allum and Wine-ſtone, grind them to Powder, adding in your grinding ſome Leaves of Silver, and put them into an earthen Pot, cloſe ſtopped with your Copper amongſt it; and then taking it out, rub it over with ſome of the Powder, and burniſh it.

A very good way to burniſh Iron, or other Metals. Take of Alœpaticum, Citrinum, and Amber, each an ounce, make them into Powder, and place them over a gentle Fire

Fire in a well glazed Pot; and when you perceive it melted, put to it a quantity of ſcalding Oil; and when the mixture is well made, let it cool; and ſo your Metal being glowing hot, lay a little piece upon it, and rub it over.

To make a good Sodder for Iron, or any hard Metal being cold. Take of Sal-Armoniack two ounces, two ounces of common Salt; the like quantity of Wineſtone in Powder, ſix ounces of thick ground Glaſs, two ounces of Clock-ſpike; bruiſe and mingle them well together, and ſo put them into a Linnen Cloth, and ſuffer the Cloth to be laid a Finger thick with ſoft Clay, encompaſſing it on the outſide, and put them into a well glaved earthen Pot, with a lid, or cover, and put that into another larger Pot of Earth well covered, and ſuffer them to ſtand over a gentle Fire, that the heat may encreaſe by degrees, till all be red hot, and run; then ſuffer it to cool, and break it ſmall, and grind it to Powder: Then in caſe of Soddering, make your Iron faſt, and the joints cloſe laid, lay a Paper under them, and upon it ſome of the Powder, as alſo between the Joints; then wrap it round with Clay, except the upper part, which you muſt leave open to ſodder at; then take the Powder of Burras, and put it into Wine or Aqua-vitæ, and ſuffer it to diſſolve, when dipping a Feather therein, ſtrike over the upper part of the Joints, and it will begin to ſmoak and hiſs; the which ended, you may uncaſe it, and find it perfectly ſoddered.

A way to ſodder warm, or rather hot, on Iron, Steel, &c. Take Gum-water, beat it up with green Herbs of any kind, till it become a Paſte, or of that thickneſs, and ſtrike it on your Metal, or lay it on the Joint, rubbing Soap over, at what time heat it, and it will prove a good Cement, &c.

To Sodder on Copper, &c. Take of Coperas an ounce, half an ounce of Orpiment, or white Arſnick, dividing it into two parts, and then make your Coperas run with Fire, then add one part of the Arſnick, or Orpiment; and after you have ſpread it thin on a fine

Stone,

Stone, add the other part; then beat it into Powder, and uſe it as the Sodder for Iron, &c.

To ſodder Latten, a Metal, or mixture of Metals ſo called. Take a File, and make the parts to be joined very ſmooth; then put them together, and being hot, ſcrape your Powder of Burras, and keep it cloſe till cool, and the Joints will be faſtened or fixed.

To varniſh like Gold on Tin, Silver, or Copper, &c. Take an earthen Pot well glazed with a cloſe Lid to ſhut in, and put into it ſix ounces, or half a pint of Linſeed-Oil, an ounce of Alœpaticum, and the ſame quantity of Maſtich, make them into a fine Powder, and put them into the Oil, and cover the former Pot with a bigger; the firſt having a ſmall hole in the top thro' both Lids, the better to ſtir the Materials, and having cloſed the outward Pot about with Clay, ſuffer it to ſtand over the Fire till it boils up to the hole, then cool it; and when you would experiment it, poliſh your Metal, and ſtrike it over the Metal, being indifferently warm; and ſo do it over twice, ſuffering it to dry between either time, and the buſineſs will be effected.

To lay Gold on Iron, a brief and eaſie way. Take liquid Varniſh one pound, and Oil of Linſeed and Turpentine, each an ounce, mix them well together over a gentle Fire, and lay them as a ground whereon to guild with Leaf Gold, &c. laying the Varniſh very thin, and ſuffering it to dry.

Another eaſie way to guild on Metal, &c. Take of Gum-Arabick, and Bole-Armoniack, each an ounce, put them into an earthen Pot with a good cloſe cover, ſet it over a gentle Fire, and when they are warm, put in two ounces of Linſeed-Oil, and when they come to a Varniſh thickneſs, lay them for a ground as the former, and on them the Gold, &c. obſerving for the better ſplendor, when it is dry to poliſh it.

For a Cough. Mix Butter and Honey, and eat a little now and then.

For Yellow Jaundies. Drink Sherry plentifully.

Eyes to preſerve, and clear. Eyebright uſed any way in Meat or Drink, dry or green, is excellent.

CHAP.

CHAP. III.

Valuable Metals, their fineneſs to be known by eſſay of Coins, and how they are to be known in their true Value; and what is to be obſerv'd in preventing your taking falſe Money.

HAving briefly run over ſundry matters relating to Metals and Minerals, I now proceed to come ſomewhat nearer their true Value, as by the Rules of Art they are laid down by curious Inquirers into thoſe Affairs, *&c.* eſpecially as to what relates to Metals, uſed in Veſſels of value and current in Coins, *&c.* the principal I take to be Gold and Silver; the reſt being vulgarly known, and therefore not requiſite to be mentioned in this Place.

As for the weight uſed for theſe fine Metals, it is that of *Troy*, conſiſting of twelve ounces; and the ounce of a hundred and fifty Carots, and may again, for the deciding of leſſer values, be divided into four hundred and eighty Grains. As for the Pound *Troy* weight of fine Gold, it is worth thirty ſix pounds, and ſo leſſens in proportion of Ally, in this manner, *viz.* an ounce of fine Gold is valued at three pounds; and that of thirty Keys fine, at two Pounds ſeventeen Shillings Sixpence; and ſo leſſening, *viz.* twenty two Keys at two Pound fifteen Shillings; twenty one Keys at two Pound twelve Shillings Sixpence; at twenty Keys two Pound ten Shillings, loſing two Shillings Sixpence *per* ounce, as a Key or Carot is wanting in the fineneſs of twenty four.

In this caſe to know the fineneſs or defect, it muſt, to prevent fraud, be found out by the Allay, which upon the Touchſtone may be done by way of Eſſay in this manner, *viz.* take Needles of Gold and Silver, and Copper Allay, ſuitable to the ſeveral Allays, and ſuffer theſe to be of four ſorts, *viz.* the firſt to be of fine Gold and Silver: The ſecond of Gold and Copper: The third of Gold, Silver, and Copper: And the fourth of Silver and Copper only: the firſt for the trial of Gold,

and

and the later for the trial of Silver, making of theſe mixtures twenty four Needles of ſundry Fineneſſes. As firſt, of fine Gold of twenty four Carots without Allay. The ſecond, twenty three Carots of fine Gold, and one of Silver. The third, twenty two Carots of Gold, and two of Silver; and ſo proceed to one Carot worſe, till there remains but one Carot of the fine Gold in mixture with the other Metals ſpecified, &c. viz. twenty three Carots of Silver, and by the ſame rule proceed to the Gold and Copper, Silver and Copper, marking each Needle for the better diſtinction upon occaſion of what fineneſs it is; by this way you will be ſatisfied of the fineneſs of any Ingot, or piece of Gold or Silver in Coin or otherways, by comparing them on your Touchſtone with the Needle, whoſe Allay you already know, or trying them, till they become equal or alike, which when wetted will plainly appear. As for the value of Silver, that which is fine is accounted five Shillings Twopence of our Money the ounce, tho' there is ſome that will fall out in fineneſs to be worth five and eight-pence, and the like. But theſe Eſſays not being to be done by every Perſon who receives Money, I ſhall by other ways inſtruct them how they may detect counterfeit Coins.

Paſt doubt, few that have the handling of Money are ignorant, that Coins of all ſorts have been counterfeit, ſome by imbaſing in mixture, others by corrupt Metals, and others by way of plating; and to know theſe, in caſe of Guineas or broad Gold: Firſt, weigh them, and try them by Eſſay as aforeſaid; and then if you further ſuſpect them, try them by Fire, or by Aqua-fortis; and if they be of baſe Metal, or corrupted with it, they will ſoon grow dim, and their Luſtre in a ſmall time more and more impair; but if you ſuſpect them plated, eſpecially Guineas, throw them indifferent hard on the edge, and the Imboſsment will open, and you may diſcover the Shell to riſe. In caſe of guilding Shillings, tho' they have the Scepters as Guineas, which ſome Perſons have had the Art to place there with graving Tools, yet your beſt way is to try them by racing with

a

a Pen-knife point in any convenient place; and altho' they are double guilded, the Silver will appear.

The counterfeit Milled is waſhed over or plated; and to diſcover this, you find the Letters imperfect, or perhaps none upon the edges of Crowns or half Crowns, the ſound likewiſe will be flat and dull, and the Metal on the outſide may be eaſily raiſed to diſcover the defect.

As for old Money, the worſt ſize is the half Crowns with pieces of Copper plated over; and theſe you may know by their riſing in the middle, falling hollow, mackle in the Stamp, or better by raiſing the thin Plate on the edge, and as for ſmaller Money moſtly mixed with Silver, your Touchſtone is the beſt tryer.

CHAP. IV.

Inſtructions for making Black, Red, White, Green Inks, &c. *for ſundry uſes as well ſolid as liquid, with that of the late Invention in Powder: Directions for myſterious Writing, and other things,* &c.

To make the beſt common, or Black Ink.

TAke a gallon of Rain-water, or clear Spring or running Water, and put twelve ounces of Nut-galls bruiſed or broken into it, and of Gum-Arabick and Coperas, of each two ounces, ſuffer it, with once a day ſtirring, to ſtand for the ſpace of twelve days in a warm place; and ſo uſe it as you have occaſion: And in this manner you may make a greater or leſſer quantity; but if you want Ink of this kind for preſent occaſion, you may boil your Ingredients in Vinegar and Water; but the Ink will not prove as the former.

To make Red Ink. Take the Powder of Braſile an ounce, white Lead and Allum of each two drams, Gum-Arabick a dram, put theſe into a pint of Urine, and ſtopped

ſtopped cloſe in a Bottle, often ſhake them together, and the buſineſs will be effected.

Another way for Red Ink. Take of Gum-Arabick half an once, Vermilion an ounce and a half, Lake a quarter of an ounce, and Vinegar indifferent ſtrong, a quart; mix them well together over a gentle Fire, and then ſuffer them to ſtand a while, ſhaking the Veſſel when you come to uſe it.

To make White Ink to write on Black Paper or the like: As in caſe of Conſolatory Letters to thoſe whoſe Friends are deceaſed. Take an ounce of Chalk, as much quick Lime, and a quarter of an ounce of Egg-ſhell with half an ounce of burnt Iſing-glaſs, grind them well together, and put them into Gum-water of any kind to a thickneſs of Writing, and the Ink, by Candle-light eſpecially, will appear like Silver.

To make Ink for the conveniency of Carriage in Powder. Take Lamp-black half an ounce, the Powder of Galls an ounce, Vitriol or Copper half an ounce, Gum-Arabick a quarter of an ounce, Ivory-black a quarter of an ounce, make them into Balls with Water; adding if they ſtick not well together more Gum; and when you have occaſion to uſe it, ſcrape a little into a ſmall quantity of Wine, Water and Vinegar, and ſtir it about, and it will be exceeding black Ink immediately; and ſo you may be always provided with it without fear of ſpilling, or want of it in places of Travelling, where there is none to be had; and inſtead of Lamp-black, you may uſe burnt Cherry-ſtones ground to Powder.

To make a Red Ink to carry to any Place as the former. Take the Powder of Brazile finely ground or beaten one ounce, mix with it the juice of Mulberries or Blackberries; or for want of them, Water wherein a little Lake has been diſſolved, add Gum-Arabick half an ounce to two ounces of the Powder, wet them to a thickneſs, and making them up in Balls, uſe them as the former.

To make Green Ink. Take the filing of Copper an ounce, Verditer half an ounce, Gum-Arabick half an ounce,

ounce, and Vinegar half a pint, put them together in a Stove or warm Oven, and ſuffer them to ſtand 3 or 4 days; then ſtir them together and uſe the liquid part.

To make Ink that will make an Impreſſion as that of Printers, &c. Take of Lamp-black an ounce, or for want of it Shoemakers Black, half an ounce of Vitriol, an ounce of fine ground Charcoal; to theſe add a quart of Linſeed-Oil, boil them up with ſtirring over a gentle Fire, till they become of a ſufficient thickneſs; then take out the ſubſtance, and move it upon a Stone or on a Ink-block with your Muller, it is very fine; and ſo it will take the Impreſſion as Letters, &c. in the nature of Prints or Pictures, &c.

Red Ink of the foregoing kind. It is made with Vermilion and Linſeed-Oil, well tempered upon a Stone with a Muller.

To write Letters inviſible, but by Fire. You muſt take the Juice of Limon and Onion, temper them well together, and let your Paper be very dry; then write what you think convenient, and ſend it to the Party you deſign, who knowing the Myſtery before-hand, ſhall no ſooner hold it to the Fire, but thoſe Letters which were blank before will fairly appear.

To make Letters appear by Water. Take well dried Paper, and having diſſolved a quantity of Allom in Gum-water, write thereon, and ſuffering the Writing to dry, dip the whole Paper under Water, and the Letters will appear ſo much whiter than the reſt, that they may be plainly diſtinguiſhed and read.

To make Letters that cannot be ſeen or read, but by reading them thro' the Paper, &c. Take white Lead finely ground with very weak Gum-water, and with it, as thin as the temperature of Ink, write upon exceeding white Paper, not very thick; and by that means when it is dry, it cannot be diſcerned from the Paper, but by looking at a light placed on the other ſide of the Paper, and then the Letters will plainly appear by denying your Eyes to penetrate them, though the Paper be tranſparent.

CHAP.

CHAP. V.

Directions for Cleanſing, Colouring and Perfuming Gloves; the way to Scowre Ribbands without much impairing the Colour; the Method of Waſhing, Starching, &c. Silks, as Luteſtring, Lawns, Tiffanies, Sarcenets, &c. with other Matters of Curioſity.

Foul Gloves to cleanſe without wetting.

TAKE your Gloves, and lay them upon a clean Board, and make a mixture of Fulling-earth and Powder of Allum very dry, and paſs them over on every ſide with an indifferent ſtiff Bruſh; then ſweep off that and ſprinkle them withered Bran and Whiting a conſiderable time; and ſo duſt them well, the which if they be not extraordinary greaſie, will render them clean as at firſt; but if they be greaſie, you muſt take out the greaſe with Crumbs of toaſted Bread, and Powder of burnt Bone; then paſs them over with a Woollen Cloth dipp'd in Fulling-earth or Allum-powder; and ſo you may cleanſe them without wetting, which many times ſhrinks and ſpoils them.

To Colour Gloves. Take your Colours ſuitable to your intention; if dark, take Spaniſh Brown and black Earth; if lighter, Yellow Oker and Whiting; and ſo of the reſt: Mix them with a moderate Size, and daub the Gloves over with the Colour wet, and ſo ſuffer them to hang till they dry by degrees; then beat out the ſuperfluity of the Colour, and ſmooth them over with a ſtretching or ſleeking Stick, reducing them to their proper ſhape.

To make an excellent Perfume for Gloves. Take Amber-greaſe a dram, Civet the like quantity, Orange-flower Butter a quarter of an ounce; and with theſe well mixed and ordered, daub them over gently with fine Cotton-Wool, and ſo preſs the Perfume into them.

Another

Another good Perfume on the like occaſion. Take of Damask, or Roſe-ſcent half an ounce, the Spirit of Cloves and Mace of each a dram, Frankincenſe a quarter of an ounce, mix them together, and lay them in Papers between your Gloves, and being hard preſſed, the Gloves will take the Scent in twenty four hours, and hardly loſe it afterward.

To cleanſe caſt Ribbands, &c. Take your Ribbands and ſmooth them out, having ſprinkled them a little before with fair Water; then lay them on a Carpet or clean Cloth at full breadth, and having made a thin Lather of Caſtle Soap, go over them gently with a Bruſh or fine Woollen Cloth; then having in readineſs Water, wherein a little Allom and white Tartar has been diſſolved, go over them till you ſee them clean; and ſo they will not only be clean, but the Colour will be fixed from further fading, if you ſuffer them to dry in the ſhade, and then ſmooth them out with a Glaſs, Stick-ſtone.

To waſh black and white Sarcenet the beſt and ſureſt way. Lay theſe ſmooth and even upon a Board or Carpet, ſpreading a little Soap over the dirty places; make a Lather then with Caſtle Soap, and having an indifferent fine Bruſh, dip it therein, and paſs over the Silks the right way, *viz.* longways, and repeat your ſo doing till you perceive that ſide is ſufficiently ſcowred; then turn the other, and uſe it in the ſame manner; whereupon take it up, and put it into fair Water ſcalding hot, ſuffering them to lie till ſuch time as you have prepared cold Water, wherein a ſmall quantity of Gum-Arabick has been diſſolved; as alſo if for white Sarcenet, Smalt, into which you muſt put them and rinſe them well, that done, take them out and fold them, clapping or preſſing out the Water with your Hands on a Carpet that is dry, keeping them under your Hands in the like manner till you find them indifferent dry; at what time in caſe of the white, you muſt have Brimſtone ready to ſmoak or dry it over, till it is ready for ſmoothing, which muſt be done on the right ſide with a moderate hot Iron.

To wash and starch Tiffanies, &c. In this case the hems of your Tiffanies must in the first undertaking be only soaped a little; as also the Lace if any be on them; then having a Lather of Soap, put them into it hot, and gently move them with squeezing them only, and not too roughly rubbing them, least they break or crumple overmuch; and when you find they are pretty clean, rinse them in warm Water, in which a little Gum-Arabick has been dissolved, keeping them as much from the Air as possible; this done, make Starch of a reasonable thickness, blewing it as you think convenient, adding a little lump of Allom to be dissolved therein; and when it is boiled to a convenient thickness, strain it, and during its being hot, wet your Tiffanies therewith gently doing it with a soft Linnen Rag, and fold them up in a clean Linnen Cloth, pressing them therein till they are somewhat dry, after which clap them between your Hands near a good Fire; and so finish the drying them over Brimstone, and shape them to your purpose, and either flick them over, or gently Iron them.

Lawns may in the manner of the former be ordered: Only observe to Iron them on the wrong side, and using Gum-Arabick-water instead of Starch, and according to what has been directed for black Sarcenet, any coloured Silks may be ordered, abating or augmenting as you think fit (according to the stiffness or limberness intended) your Gum-water.

To wash and starch Point-Lace. Have a Tent prepared, fix the Lace in it, and draw it pretty streight, then having a Lather of Castle-Soap pretty warm, with a fine Brush dipped therein, rub over your Point gently; and when you perceive it clean on the one side, do the like on the other; then cast fair Water in which a little Allom has been dissolved to take off the Suds; at what time having very thin Starch, go over with the same on the wrong side, and on the same side Iron it when dry; so with a Bodkin open it, and set it in order.

To clean Point-Lace, if not over dirty, without washing, fix it in a Tent as the former and go over with fine Bread, the Crust being pared off, and when it is done, dust out the Crumbs, &c.

CHAP.

CHAP. VI.

Inſtructions for ordering and framing Curious Wax-work, Imboſſing in Silver, or other Metals, making Flowers of Silk; carving and caſting Imagery in ſundry Figures: The Art of poliſhing, &c.

Wax-work, its Nature, and how to be managed and performed.

IN this caſe you muſt provide your ſelf with the fineſt Virgin-Wax, rarefie it by often melting over a Fire, till it become exceeding pliable, and render it the better, ſo put in a quantity of clarified Turpentine; and having conſidered your Figure, you muſt work it in Water a little warm, and move it into a curious flatneſs; then imboſs it in Moulds, or as ſome will have you, caſt it, eſpecially where a curious reſemblance of a Head or Face is required, working the reſt of the Body proportionably upon Sticks or Wiers, ruffling as you ſee convenient the Garments, or pleating them; then having your ſuitable Colours, paint each part as the property with Water Colours prepared according to what has been directed in Painting or Limning with thoſe Colours, and with a ſmall Ivory Poliſher go gently over thoſe parts you will have to ſhine; and then having prepared Glaſſes to cover them, which will give them the greater Luſtre, place them where you pleaſe for Ornament.

As for Birds, Beaſts, Trees, Fruits, and the like, they muſt be tempered after their form or manner, and reduced in their ſundry Shapes, not forgetting every one to have its proper and natural Colour; and for the adornment of any Landskip, repreſent of this kind the Ground, where Graſs is required, or it may be Moſs, the which alſo ſerves for Shrubs: But in caſe of the Leaves of green Trees, they may be Paper or Horn, thin and finely coloured, ſharped and twiſted upon

Wires in order as you ſee convenient: But as to every particular of this kind, 'tis only Practice can perfect you.

To imboſs Plate, as Silver, Pewter, or other Metal. Having your device drawn upon the piece you intend to imboſs, you muſt lay the right ſide upon a Bed of Bees-Wax covered over with a fine Cloth; and ſo proceed to punch out the Metal with Punchers, or Tools for that purpoſe, going over every Stroak and Line as in caſe of Etching or Graving; which done, you muſt turn the right ſide, and fill the Imboſsments with Wax, that the hollows may be cloſe, and not ſink; then with your fine Tools and Graver poliſh and work the Shapes in their due order, by correcting and amending the roughneſs made by the punching out, and giving fine touches and ſtroaks where you ſee it needful, and the Figures will appear very pleaſant, being a Performance of great Antiquity.

To work Flowers, &c. in Silk or Silver. Take raw or fleaſy Silk of ſundry Colours, comb out the Droſs or Ravel, laying each Colour by it ſelf; then twiſt and mingle the Colours by placing upon Wires, according to the natural form of the Flower intended; then comb them out, and faſhion them more exactly with your Sciſſars and Needle; then dip them in Gum-water, and by drawing them through it whilſt wet, open and ſhape them with your Fingers; that done, ſet them to drying in the ſhade; and in that form they will remain very pleaſant and delightful: And thus you may perform them ſingle, or on Branches with the Stalks ſuitable, &c. You may in this manner form Fruits, and other things very material.

Carving of Images, &c. what is to be materially obſerved therein. Reſolving to Carve any curious Figure, you muſt provide your ſelf with a ſimilitude or likeneſs, either in Statue or Portraiture; whether it before Wood, Ivory, or any thing tractable in this nature; and before you proceed to your rough Carving, with a Black or Lead Pencil, or piece of Coal, draw as well as may be the true Proportion, Poſture and Features, having before reduced the Wood or Stone to ſome ſet

form;

form; then cut them out as you ſee it convenient, or let them ſwell as curiouſly as may; then with ſmaller Tools proceed to poliſh them yet finer; and ſo working by degrees till you have brought your matter to a proportion; and then remains the Curioſity of faſhioning to the Life: And in this you muſt be curious in eying your Copy, beginning with the Head or upper part, and ſo deſcend by degrees, running it over three or four times before you come either to waſhing or poliſhing, that no unſeemly knob or other deformity may appear, *&c.* And in caſe any Statue or Image, either caſt or carved, require to be painted in lively Colours, this Rule for painting in Oil ought as well in the mixtures as laying on, to be obſerved.

In caſting of Images or Figures, the curioſity lies in forming the Mould, and bringing the ſtuff to a fineneſs, which if done in beaten Chalk, Terace, Plaiſter of *Paris*, or the like, they muſt be mixed with Gum-water, the better to ſtrengthen them, but in caſe of Lime, *&c.* it needs not; and then no more is required than bringing the ſtuff to a fit temper or ſtiffneſs of dough; and the Mould being to claſp in the middle, and take aſunder, fill it with the Material, and ſqueeze it hard in a Vice, having rubbed the outſide of the Mould before with dry Whiting or Chalk finely beaten, to prevent the ſticking; then take it out, and ſet it to dry in a place where there is a Stove; and when it is thoroughly dry, you may glaze or colour it at Pleaſure.

If you deſign any Figure in Metal, and will not be at the trouble of Imboſſing it in the expanſe; and ſo ſodder it together, thereby rendering it hollow, as in fine Metals 'tis often done; then muſt you make your Mould of Brick, Chalk, fine Clay, or the like, and place it when dry and firm in a Bed of Sand, or in the Ground, keeping it cloſe together; have then your Metal rarefied or purged from droſs by well refining, and a Trough or Spout layed from the Plug of your Melter, and when the Metal is melted and skimmed, ſuffer it all at once to run with what ſpeed it may into

the Mould, that every part taking hold of each other whilſt liquid, the whole Maſs may the better incorporate and render the thing deſigned without flaw or ſcaling; ſuffer it then to be thoroughly cold before you take it out; which done, poliſh it by taking off the rough ſide, and proceed with your Tools to rectifie what is unſeemly.

To poliſh Marble, or any curious Stone. Take fine Sand, and the Powder of Alabaſter, poliſh it with a Poliſher; and then ſuffer it to be laid over for a time with Oil; after that calcine, or burn Egg-ſhells, and with the calcination thereof rub off the Oil, and poliſh it, and it will be of a laſting Gloſs, &c.

To make any Writing on Parchment or firm Paper, decay and become unlegible in a ſhort time. Take quick Lime, and mix with it the white of an Egg, and rub over with the ſaid mixture the Parchment or Paper, when you intend to write; and altho' the Writing for a time will ſeem fair, it will in a ſhort time decay and look ſo faint, that it can by no means be read.

To make new Writing look old, and of a long ſtanding. Take a dram of Saffron, and infuſe it in half a pint of Ink, and ſuffer it to warm over a gentle Fire, and it will cauſe whatever is written with it to turn yellowiſh and appear as if of many years ſtanding.

To make a curious Purple Ink. Take a quarter of an ounce of Lake and half an ounce of Indico, and bruiſe them ſmall; which done, warm half a pint of Water, and infuſe into it an ounce of Gum-Arabick; then put the Colour in, and ſhake them well together.

To take Blots or Letters out of Paper or Parchment. Take an ounce of Allom, diſſolve it in a quarter of a pint of Water over a gentle Fire, and drop a drop of it warm as you ſee occaſion upon the ſpot, and ſuffering it to lie for a time, take it up again with clean Cotton-Wool on which you have breathed to moiſten it, and the buſineſs in once or twice doing will be effected; or take a little Spirit of Vitriol and put on with a Feather.

To render Writing very fair. Take Gum-Sandrick, bruiſe

bruiſe and ſift it very fine, dip into it Cotton-Wool, and gently rub therewith your Paper or Parchment; and this is called the pouncing it, and is often uſed by Schoolmaſters, to ſet off their Copies to advantage.

To write Letters like Gold without the help of Gold. Take of Vermilion half an ounce, Gum-Armoniack the like quantity, bruiſe and mix them with the whites of a couple of Eggs, and temper them in Water to a thinneſs, that you may write therewith; and then your Writing being dry, glaze it over with a Poliſher.

To write Letters that will appear like Silver, without any Silver. Take of Block-tin, Quick-ſilver, and the whites of Eggs, each an ounce, melt the two former, and having ground them fine and ſmall, put them to the later, and mix them with Gum-water to the thinneſs of Ink, and ſo proceed to write, poliſhing your Writing when dry.

How to prepare your Shell-Gold, and write with it. Take the ragged Cuttings of Leaf Gold, grind them upon a curious ſmooth and clean Stone with Gum-water and a little Allom-powder; and when they are well incorporated, drop of the ſubſtance into ſmall Shells; and when you uſe it, temper a little fair Water to bring it to a thinneſs; and having written with it your Pleaſure, ſuffer it to dry; and then poliſh the Writing, *&c.*

To make a good Red Sealing-Wax. Take of Bees-Wax a pound, fine Turpentine three ounces, red Lead, or Vermilion finely ground an ounce and a half, Olive-Oil an ounce, melt well the Wax and Turpentine, adding an ounce of Roſin fine in powder; and when they are well melted, and the droſs taken off, put in the Lead or Vermilion, and ſtir them well together, till they are well incorporated; and ſo make them into what form you pleaſe for your uſe.

To make black Wax. Take of Lamp-black, or black Earth an ounce and a half, Turpentine and Roſin of each four ounces, of Bees-Wax a pound, incorporate them as the former with Oil.

To make green Wax. Take Verdigreaſe an ounce, and all the other Ingredients, except the colour, as the former, ordering it in the like manner.

To make golden or tranſparent Wax. Take clarified Roſin four ounces, Turpentine two ounces, Bees-Wax four ounces, Olive-Oil two ounces, melt them well together; and ſcatter in the melting diſordered or ſhattered Leaf Gold, and ſuffer it to mix and incorporate; then poliſh it over, when made into form, and the Gold will appear in the tranſparency.

Sealing Wafers, how to make them. Take fine Flour ſifted or boulted, that no Bran remain, mix with it the Clare of Eggs, a quantity of Iſing-glaſs, ſo called, and a little Yeaſt, mingle the Materials, beat them well together, ſpread the batter, being made thin with Gum-water on even Tin-Plates, and dry'd in a Stove, cut them out for your uſe.

CHAP. VII.

How to make Artificial Vinegar: Fire in Chimneys, how ſuddenly to extinguiſh it; blowing up Ships under Water, blowing up Houſes, and weighing of Veſſels that are ſunk, how to effect 'em, with Directions for Dyalling and Gauging.

A way always to be provided with Vinegar for a Sauce wherever you Travel.

TAke the Blades of green Corn when young, beat them exceeding ſmall in a wooden Veſſel, then ſtrain out the Juice, and take the remaining ſubſtance and ſteep it in ſtrong Whitewine Vinegar, or the Juice of Limons, and ſuffer it gently to warm over the Fire, and ſo let it ſtand in a warm place till the Vinegar be conſumed, and then make the Matter up into Balls, and put them into a Box and dry them, and ſo coming into any place where Vinegar is not to be had, ſcrape a little of the Powder into a little Water, and it will afford you, when heat over the Fire or ſtirred well together, a very good Sauce.

In caſe of the firing of a Chimney, the means whereby it may preſently be extinguiſhed. Take an ounce of Gunpowder,

powder, and a quarter of an ounce of Brimſtone fine beaten, wet them with Water, and make wild-Fire thereof, and throw it in ſmall pieces into a ſmall Pan of Charcoal, or Coal Fire, that the Smoak may go directly up the Chimney, and it will cauſe the Soot the Fire has taken inſtantly to fall by parcels, till there be none left.

To break or blow up a Ship or Veſſel that is ſunk, though lying ſome Fathoms under Water. To do this you muſt find how the Veſſel lies, and you can conveniently let down a Barrel or more of Powder in a Stanch Cask, with a Cane or Leather Pipe let into it, and pitched round, ſo that it may, when the Barrel is ſunk to the loweſt, appear with the uppermoſt part above Water, then having a Boat ready, and a red-hot Bolt of Iron with a pair of long Pincers, drop it into the Cane or Spout, ſo that it may fall into the Powder, at what time make off as faſt as may be, and you will perceive immediately a trembling of the Water, and after that a Smoak to burſt out, at what time Planks, Goods, or any thing capable of floating will riſe, the Veſſel being broke by the force of the Powder.

To weigh any Veſſel that is ſunk, the beſt way. Laſh a couple of Veſſels together, and graple the Veſſel ſunk, faſtning the Graples, a Pole lying acroſs the two Veſſels, the ſaid Veſſels being filled and low ſunk by their weight, then empty them, that they may riſe, and they will cauſe the ſunk Veſſel to riſe with them as far as they riſe, then tow them as near to the Shoar as you can at high Water, and at low Water the ſunk Veſſel will appear above it, and you may empty it at your Pleaſure; and in this caſe twenty Tun of Veſſels, Floats or empty Casks above Water will raiſe a hundred Tuns under Water.

To blow up Houſes to prevent the progreſs of a Fire, the beſt and ſafeſt way. If ſo it happen the Houſe be Timber, and you would throw it off from the Fire, place your Barrel of Powder under the main Girder on the contrary ſide you intend to turn it, and over it a Beam or piece of Timber, and fix in that another

upright, ſcotch the Barrel; on either ſide lay a Train upon Boards, covering it with Cloth to prevent its taking Fire before you intend it, and then having a piece of Match faſtened upon a Linſtock, give Fire to your wild-Fire at the end of the Train, and ſo retire.

If you would take a Timber or Brick-houſe upright, place the Powder in the Cellar under the main Beam in the manner aforeſaid, juſt in the middle, or if there be no Cellar, bed it about as much as may be, and it will take it directly up from the Foundation, and then ſuffering it to fall directly down, it will break in pieces, at what time the Timber may be drawn away to prevent the Fires over-running it, and ſo by that means creep to the next Building, and render your Undertaking fruitleſs.

To make a Sun-Dial upon the Ceiling of a Room, and convey the Beams of the Sun to it. Prepare the Ceiling exactly level, by raiſing it with freſh Plaiſter, if there be any defect. Draw the Dial according to the form of a Horizontal Dial, making the Lines and diſtance of equal frame, ſet up your Gnomon or Shadower, ſo that you may move it, and leave blanks for the Figures; this done, conveniently place a Looking-glaſs, or burniſhed piece of Iron or Steel, ſo that it may reflect the light of the Sun upon the Dial intended, then make it by another Dial how the Light moves, which it will do with the Sun, and according to that, being a true one, place your Figures, then take off the Gnomon or Shadower, and lay it aſide, fixing the Glaſs or burniſhed Steel, that it may remain unſubject to be removed or ſhaken, and you may at any time, without ſtirring out of the Room, know, whilſt the Sun is upon the Dial, what it is a-Clock.

To make a Dial in the Glaſs of any Window that has the benefit of the Sun. Take a curious, ſquare, ſmooth Pane or Quarry of Glaſs, fix it even with ſtrong borders of Lead in the Window, and ſet up the Gnomon ſiding, ſlaunting, or direct, according as the Sun has power upon it, then by a Watch, Clock, or other true Dial, mark how the Shadow moves to the time of the

day

day with the point of a Diamond, and accordingly d'aw the Lines from the Center, and frame the Figures in due proportion and diſtance.

Directions to Meaſure or Gauge any round Cask or Veſſel, &c. In the firſt place multiply the half of the thickneſs in inches by half the Circumference, and that Product by the length in the inches, the laſt Product for Ale divide by 288, and the Quotient ſhews the number of Gallons in the Barrel, and to bring theſe Gallons into Barrels, divide the Quotient by 36, for ſo many in caſe of Beer a Barrel contains; but in caſe the Veſſel very much bellies in the middle, meaſure but half of it to the Bung, and work as before; and adding the Products together, you will have the true Account.

CHAP. VIII.

Another Treatiſe of making ſundry Inks.

To make Powder upon which you may write with Water.

BRuiſe to Powder a handful of Galls, half an ounce of Vitriol, and the like quantity of Gum-Arabick and Gum-Sandrick; mingle them finely ſifted together, and when you have occaſion to write, rub over your Paper with a little of it laid upon Cotton-Wool; and then having ſufficiently ſmoothed it, take Water and write upon the ſaid Paper; then ſuffering it to dry, it will take a black impreſſion, occaſioned by the Powder, as if it had been written with Ink.

Another curious Powder-Ink, fit for Travellers, &c. *or the* London *Powder-Ink*. Take ten ounces of Nut-galls, bruiſe them well, three ounces of Roman-Vitrol, Gum-Arabick and Roch-Allom, of each an ounce, make them into fine Powder, ſift and dry them; at which time put the Powder up in cloſe Boxes or Papers, and when you have occaſion to uſe it, put a little quantity into a good quantity of Water, and ſhake it well about, and it will inſtantly change the Colour of the Water, and at length become good Ink; that is, in leſs than two hours ſpace; by which means any Perſon without giving himſelf conſiderable

ſiderable trouble of Carriage, may be ſtor'd at all times.

Another curious Powder of the like Efficacy, how to make, and lately known by the White Powder-Ink, *ſo much coveted of late*, &c. Take Gum-Sandrick two ounces, beat it well to Powder, and ſift it thro' a fine Sieve, and as much of *Chancaltho*, ſo call'd by the *Latins*, which may be had at the Druggiſts; mix them well beaten and pulveriz'd; and a quarter of an ounce of this, or more, will turn a Pint of Water or Vinegar into a curious writing Ink in a very ſhort time.

Mathiolus's *Direction for making a curious laſting Ink*, &c. Take five ounces of Galls well bruis'd, *Roman* Vitriol three ounces, Gum Arabick 2 ounces, Bay Salt a Dram, or inſtead of it a quantity of Allum, mix 'em well together in a new glaz'd Earthen Pot, and pour upon the mixture Whitewine, very ſtrong and hot, about five Pints, and ſuffer it, the Weather being hot, to ſtand in the Sun fifteen days, or it may be done in a Stone Oven, or in the Chimney Corner, frequently ſtirring it about; and ſo pouring out the droſs, an excellent Ink will be had, not ſubject to change by time, nor alter its Colour.

Two excellent ways of ſpeedily making Ink, &c. 1. Take Vitriol and Gum Arabick, of each an ounce, of Galls well broken a like quantity, of ſharp Wine, or Wine Vinegar, ten ounces, and let them ſtand together for an Hour, ſometimes ſhaking them, they will turn the liquid part exceding black, and make it fit for your uſe.

2. Take of Galls half an ounce well bruis'd, mingle with it a like quantity of Gum Arabick, and of *Roman* Vitriol eight Drams, put theſe into eight ounces of Whitewine pretty hot, and in as ſhort a time as the former a perfect Ink will be made.

How to make a Black that will not only ſerve for Ingroſſing, but Painting, &c. Take Copperas half an ounce, bruis'd Galls an ounce, Lamp-black an ounce, Gum Arabick half an ounce, mix them with a Pint of Wine or Vinegar, ſet them over a gentle Fire, and let them ſimmer till a half part be conſum'd, and what remains will render an excellent and black Ink.

The Famous George Machijus's *Receipt for fine Writing Ink*,

Ink, &c. Take of Galls three ounces, *Roman* Vitriol two ounces, Gum Arabick half an ounce, and having well bruis'd them, infuse the Galls in two Quarts of Whitewine eight days, stirring them each day, and 3 days after the putting in the Galls put the Gum in, dissolv'd in a little Wine by it self before it be put in, three days after the Galls and the Vitriol as long after that, stirring them at several times, and at the end of eight days the Ink will come to a full perfection.

To make a kind of Ink to write obscurely, and not to be read, unless the Paper whereon the Writing is be held to the Fire. Take Sal-Armoniac and Nitre, half an ounce of each, mingle them with the Juice of a Limon over a gentle Fire, and having took the liquid part from the dross, use it when cold, and so holding the Paper after 'tis written on to the Fire, the Letters will fairly appear, otherwise they will not.

To take away spots or defects out of Writing, either on Paper or Parchment. Take burnt Roch Allum half an ounce, and as much of the Flower of Brimstone, and being in Pouder wet the Paper a little, and put a small quantity of the Pouder upon the place, rubbing it gently with your Finger, and the spots will never appear. And thus much for treating of Inks, &c. wonderful necessary, useful, and profitable on all occasions.

A Water that will make a Man see in forty days, tho' he has been seven Years blind, if he is under Fifty. Take Fennel, Smallage, Rue, Betony, Vervain, Eyebright, Pimpernel, Celidon, Sage, *ana* a Quartern, and wash them clean and stamp them, do them in a Mashing-pan, and put to them a Quart of good Whitewine, and 30 Peppercorns pouder'd, six Spoonfuls of live Honey, and ten Spoonfuls of a Man-Child's Urine that is innocent, and mix 'em together, and seeth 'em till half is wasted, then strain it and clarifie it, and put it in a Glass Bottle well stopt, and put thereof with a Feather into the blind Eyes when going to Bed, and in forty days he will see; 'tis good for all manner of blind Eyes; also wild Tansie-water is good for the Eyesight, so is eating Fennel Seed. *Rich Closet of Secrets.*

CHAP.

CHAP. IX.

The Art of making Waſhes, and other Beautifying Materials, for taking away Sunburn, Morphew, Freckles, Roughneſs of the Skin, and reſtoring a curious Complexion; as alſo whitening the Teeth, Enlivening the Eyes, Curling and Colouring the Hair, &c.

A Way to reſtore a faded Complexion.

TAke the Flowers of Roſemary, Comfrey, and Cammomil, boil them in Whitewine, and waſh your Face and Hands therewith Morning and Evening.

To create a very fair Complexion. Take two ounces of white Tartar, burn or calcine it, then quench it in the diſtill'd Water of Roſes, and waſh the Face with it.

To render a freſh and comely Complexion. Take an ounce of the Oyl of Almonds, the like quantity of the Oyl of Myrrh, bruiſe in them of the Powder of Gum-Sandrick a grain, and with the whole mixture rub and anoint the Face.

To render the Skin clear, and of a very fair Complexion. Take Bean-bloſſoms, and the Water that diſtils from the Vine, with the Flowers of Fumitory, diſtil them, and make a Waſh with what proceeds therefrom.

To make the Skin ſmooth and ſhining. Take of the Marrow of Swines-feet an ounce, Oyl of Nutmegs a quarter of an ounce, Deers ſuet half an ounce, Oyl of Bay-berries two ounces, make them into an Oyntment over a gentle Fire, and anoint the Face, Hands, or any part of the Body therewith.

To remove Freckles, Tan, or Sunburn. Take the juice of Burdock leaves and Limons, of each a like quantity, mix them together, and add half as much Oyl of Cammomil, a little Rye-meal, and the Gall of a Cock or Capon, make them into an Oyntment, and anoint the place therewith, and in a ſhort time the defect will be remov'd.

To

To remove Pimples or Redneſs. Take an Egg and roaſt it hard, then take out the Yolk at the top, and fill it with Copperas, and put it cloſe cover'd in the Embers, till the Copperas is melted or become Water; then pour out the Water and bath the Face with it; but if it be too ſharp, you may allay it with the water or juice of Celandine; and in time the Pimples will be abated.

To remove the Redneſs in the Face occaſion'd by Scalding, Blaſting, &c. Take a handful of the bark of Elder, as much Rue and the roots of Scabious, with an ounce of the Flowers of Cammomil; bruiſe them together, and boil them in a pint of Milk, half a pint of Olive-Oyl, adding a quarter of a pint of Verjuice, till the liquid part become thick as an Oyntment, then ſtrain it out, and cool it, ſo anoint the place Morning and Evening.

To take away ugly Warts or Moles not too deep impreſs'd. Take Rhubarb a dram, Camphora the like quantity, the Oyl of Petrolium half as much, and an ounce of the juice of Houſleek, bruiſe and beat theſe in a quarter of a Pint of Vinegar over a gentle Fire, and anoint the place or part therewith, and in often ſo doing, you will find your deſire effected.

To make a ſwarthy Complexion fair and clear. Take the Liver of a Goat, dry it to Powder in a Stove or Oven, then ſteep the Powder in Whitewine, adding a quarter of a Pint of the Juice of Celandine, an ounce of Coriander-ſeeds, and as much of Fennel, boil 'em over a gentle Fire, and with the liquid part bath the Face, and ſo continue to do often, and it will remove the cholerick humour occaſioning ſwarthineſs.

To briten and enliven the Eyes. Take Vervain, Pellitory of the Wall, Smallage, and Betony, with the Flowers of Eyebright; diſtil them, and waſh the Eyes with the water Morning and Evening, and it will not only make them bright and clear, but give a true proſpect to the decay'd ſight.

To know if a Woman be with Child. Let her make water in a braſs Baſon, and one Night let a ſteel Needle be put in it, if ſhe is with Child, the Needle will be full of red Spots; if not, it will be black and ruſty,

or

or cancerated. *Mizaldus* saith it was prov'd. *Wicker.*

To make Bloom-water, an excellent Beautifier upon all occasions. Take the Blossoms of Peaches, Baum, Lavender, Cotton, and Rosemary, steep them in Whitewine, distil 'em, and the Water will prove a fine Beautifier.

To make an excellent Pomatum for the Hands and Face. Take Sheeps-marrow an ounce, Oyl of Sweet Almonds the like quantity, the Juice of Smallage a quarter of a Pint, Bean-flour half an ounce, make them up into an Oyntment, and anoint the Hands and Face therewith warm, and it will make them plump, soft, and free 'em from cracks, chops, or roughness.

An excellent Paste for the Hands. Take the Flour of sweet Almonds an ounce, Rye-meal two ounces, white Starch an ounce, and Milk half a pint, with which make these before-mention'd into a Paste, and that Paste into Balls for your use.

To find if a Woman is painted with Red. Chew some Cummin-seeds or a Clove of Garlick, and it will vanish: 'Tis probable you must breath in her Face. *Wicker.*

An Oyl to soften the Skin, and render it fresh. Take of the Oyl of Nutmegs an ounce, Ambergrease a dram, Oyl of Cammomil an ounce, the juice of Comfrey half a quarter of a pint, make 'em into an Oyl or Oyntment over a gentle fire, and supple 'em into the Skin very hot, and in often so doing it will wonderfully beautifie, and cause an excellent flavour, *&c.*

An excellent way to sweeten the Breath. Take Sal-Armoniac a dram, Beaten Ginger two drams, the Spirit of Cloves a dram, Coriander-seeds in fine Powder a quarter of an ounce, Oyl of Mastich a dram, bruise 'em together, and make them up into a Ball, and each Morning scrape about the quantity of a large Pea into a glass of Wine or Beer, and drink it off.

To make Hair grow. Take of the Powder of Bith-wort-roots a dram, of the juice of Fennel half an ounce, Ivy-berries dry'd and beaten in Powder an ounce, the Juice of Houseleek half a quarter of a Pint, and of White-wine a Pint, boil these over a gentle Fire, to half the consumption of the liquid part, and wash the place de-

ficient,

ficient, and in a ſhort time, if that part be ſubject to Hair, it will cauſe it to grow and encreaſe.

To take away Hair. Take the juice of Hellebore or Bears-foot half an ounce, as much of Burdock-roots and the roots of Cuckowpintles, and anoint the place with it, and by your often ſo doing the Hair will fall off.

To make any colour'd Hair black, or of a dark Colour. Take burnt Ivory ground to Powder a quarter of an ounce, Soulters Ink the like quantity, the Juice of Hemlock a quarter of a Pint, incorporate them over a gentle Fire till the moiſture be near conſum'd; then add black lead powder to dry up the reſt, and with this rub your Hair or powder it, and it will be a curious black, as likewiſe laſting, if before you waſh your Head with Whitewine wherein Plantane roots have been ſod.

To make Hair curl. Take the Powder of Elecampane Roots well dry'd, and as much of Allom in fine Powder, wet your Hair a little with Water wherein Raiſons have been ſteep'd, and ſo ſprinkle on the Powder with a fine Sprinkler, that it be all over, then with a pair of Curling Irons ſomewhat hot turn it up in Ringlets under a Cap, and ſo let it dry, as likewiſe continue for the ſpace of a Night, and next Morning comb it out, and the Pouder that remains will not only fly away, but the Hair will fall into curious Curls, and ſo continue without any further trouble for a very long time.

A way ſpeedily to take away the Spots occaſion'd by the Small-Pox. Take half an ounce of Copperas, and diſſolve it in the Juice of Limons, and anoint the Spots with it when warm, and their redneſs will never appear any more.

To prevent Pittings. When the Diſtemper begins to appear, rub the Face over gently with Honey, Oyl of Roſes, and a little Allom diſſolv'd and well mix'd together over a moderate Fire, and in ſo doing every other day the Pits will be prevented, if the Party uſes no violence to himſelf by ſcratching.

To whiten Teeth. Take a piece of fine Pumice-ſtone, grind it to *Pouder*, adding to that *Pouder* a little quantity

of

of Allom Pouder, and by often rubbing the Teeth with it they will, if ſound, be as white as Ivory; or rub your Teeth with Brick-duſt, or *Flanders-Tile*, laid on a wet Linnen Rag.

CHAP. X.

A Miſcellany of rare and curious Secrets not yet touch'd upon.

How to ſeparate Gold and Silver from other Metals.

TAke Mercury and put it in a Melting or Refining Pot on the Fire, adding ſome Varniſh-glaſs beaten to pouder, and being finely mix'd, lay it in pouder upon the Metal that is gilded with Gold or Silver, and ſet ſome hot Coals under it, and it will take off the gilding, and render the Metal as if it had never been gilt; and in this Caſe you may ſave the Gold and Silver, if of value, by putting to it Quickſilver, which will attract it into a body.

To kill or allay Mercury or Quickſilver. Put which of theſe you deſign in a Mortar of Iron or Braſs, adding ſome Olive-Oyl, mix them together over a gentle Fire, add moreover when it begins to bubble ſtrong Wine Vinegar, and in ſo uſing the aforeſaid Materials, they will become ſo hard as to endure the Hammer.

To make an Egg fly in the Air. Fill an Eggſhell with *May* Dew, and ſet it in the hot Sun, and the Sun will draw it up.

To boil Gold and Silver in the way of cleanſing. Take Tartar bruis'd to pouder, put to it a conſiderable quantity of Spring Water, and ſo being boil'd up over a quick Fire, put in the Plate, and let it continue for a conſiderable time.

To ſoften Gold or Silver. Take Sublimate Mercury, Sal-Armoniac, of each a like quantity, and when the Metal is melted, put a ſmall quantity of the pouder into it and let it lie thereon; if Gold put more, if Silver leſs.

To

To ſoften Bone or Ivory. Take Bone or Ivory that is hollow, and take the Juices of Alexander, Milfoil, Radiſh Roots, Horehound, and ſharp Wine Vinegar, and fill the Cavity, after which, lay it near a gentle Fire, that the heat may infuſe, and in ſuffering it ſo to do, in a little time it will mollifie the hard quality.

Experiments of other Natures, viz. *How to keep Grapes freſh all the Year.* Gather the Grapes on a fair Day, when no wet or moiſture is upon them, cleanſe them from thoſe that are any ways periſh'd, and let 'em ſteep a while in white Muſcadine a little warm, after which dry them, and ſtop them up in new earthen Bottles, ſetting them in a cool place, free from the Sun or too much Air, and they will keep without periſhing.

To encreaſe Pigeons in a Dovehouſe. Hang a Man's Scull in the Pigeon-houſe, and they will increaſe and live quietly. *Albert.*

To make Mellons, Cucumbers, or ſuchlike Fruit, ripen by Art. Boil Wheat-bran in Water and a little fine Mould, and water the Roots of the Plants with it Morning and Evening, ſetting them in hot beds, and covering them from colds and blaſts with Pots, Glaſſes, *&c.*

To make Trees bear Fruit of any Colour. Bore a hole in the body of the Tree, at ſuch a time as the Sap begins to riſe, and plug it up cloſe, and you will perceive what liquid Colour you put in, the ſame will tincture the Fruit, and give it a participation of its hue.

To kill or drive away Fleas or Buggs. Take the Juice of Rue, and the Gall of an Ox, mix them together, and anoint the poſt and frame therewith, and ſtrew in the Mat powder of Southernwood and Wormwood.

To catch Birds with your Hands. Put any Corn into Wine Lees, or Juice of Hemlock, and caſt it to Birds, and they will eat it and be drunk, that you may take them with your Hands.

To make any Perſon that is hoarſe, or ſpeaks inwardly, have a very clear Voice. Take the Flowers of Elder, dry them in the Sun, and ſo order it that without taking wet they may be beaten to Powder; which done, keep the Powder in a Glaſs, and when you would uſe it, put

as

as much as will lie upon a ſixpence into a Glaſs of W pretty warm, and drink it off.

To make Letters that will ſoon vaniſh. Take Aqua-v diſſolve a litt Camphire in it, and put to them Aſhes of burnt Straw well mix'd or tempered toget which for a time will produce a fair Writing, but your pleaſure you may wipe it off from the Paper Tablet: Nor will it be long e're it decays of it ſelf.

To renew Letters decay'd. Boil a few Galls in Wi and wipe over the faint Letters with a Spunge dipp in the Juice, and they will be as freſh as when written.

To renew the Marks in Knives, that are in a manner worn out. Poliſh them well with Powder of Emeril and Oyl; after that, cleanſe them with Chalk to a bright neſs, then wet the Blades in Lime Juice and Tanners Water made with Vitriol, and they will cauſe the Marks to appear exact and fair, and thus you may deface 'em.

How to grave a Porphyry Marble without an Iron Tool. Take a ſmall quantity of ſublimate Mercury, a like quantity of Sal-Armoniac, with as much Verdigreaſe, diſtil them in a Retort of Glaſs, calcine a ſmall weight of Tin and Fireſtone, and ſome Sal Gem, diſtilling 'em over three times in Vinegar, and ſo making a ground of Wax, Roſin, Turpentine, lay it on the Stone, as in the Caſe of Etching, and when you have drawn with an Iron point what you intend, pour on the Water, and ſuffer it to continue till it has corroded the Stone, according to what you drew upon it.

How to make Water riſe by heat, &c. Let there be a Veſſel above, either of Braſs, Clay, or Tin, and a Pipe in the middle of it, that may deſcend into the Water below, ſo faſten'd that it takes not Air, then let the Veſſel above be made hot, and it will by means of the Airs being rarefy'd by the heat, attract the Water to it.

To catch Fiſh preſently. Make up Balls with dry'd Barly-meal, and caſt them to the Fiſh. *Wicker.*

CHAP.

CHAP. XI.

Another *Miſcellany of rare and curious Experiments, uſeful, profitable, and altogether pleaſant.*

To cauſe Water (contrary to the nature thereof) to aſcend.

Repare a Baſon with a pint of Water in it, or thereabouts, then take an Earthen Pot or Jug with a round belly (fitted for this ſervice) and light a piece of Paper, caſt it into the Jug flaming, then turn quickly the Mouth of the Jug downward, and ſet it on the midſt of the Baſon of Water, it will ſuck up all the Water, if it be not more than it can receive and contain within the belly thereof.

To carry a Jug or Earthen Pot ſticking without any thing unto the Palm of the Hand. Take a piece of Paper, ſet it on fire, and caſt it flaming into the mouth of the Jug, preſently clap the palm of your Hand on the mouth of the Jug or Pot, not hollow, but plain and ſmooth, the Jug will not fall from your Hand, but you may walk many Paces, and carry the ſame ſticking unto the palm of your Hand, unleſs by violence you pluck it away.

To break a Stick placed upon the brims of two Glaſſes, and not break the Glaſſes. Place the Glaſſes on a ſmooth Stone of an equal height, and put the Stick upon them; then take a Battoon or Cudgel, and therewith ſtrike upon the midſt of the Stick perpendicularly, or downright; ſo may you break the Stick, and not hurt the Glaſſes.

To take the impreſſion of any Seal. Melt a little Brimſtone, caſting in ſome Ceruſe or white Lead, put this mixture on the Seal, ſtrengthening it with a ſmall piece of Paper a little bigger than the impreſſion is; being cold, take it off, and you will find the print of the Seal thereon.

How to write a Letter ſecretly, that cannot eaſily be diſcovered or ſuſpected. 1. Write your Mind at large on one ſide of the Paper with common Ink, and on the other ſide with Milk that which you would have ſecret;

and

and when you would make the ſame legible, hold that ſide which is writren with Ink to the Fire, and the Letters will ſhew blewiſh on the other ſide. 2. Rule two Papers of one bigneſs with Lines of an equal diſtance, make the one full of Glaſs Windows, thro' which you muſt write your mind upon the ſecond Paper, then fill up the ſpaces with other words at your pleaſure; but if all were made to hang together in good ſenſe, it would carry the leſs ſuſpicion. Each Friend muſt have one of theſe cut Papers to read all ſuch Letters, for without the Paper it will trouble a good Decypherer to read the Letter.

Of the Dial upon the Fingers and Hand. Is not a Commodity very agreeable, when one is in the Field, or in ſome Village, without any other Dial to ſee only by the Hand what of the Clock it is, which gives it very near, and may be practiſed by the leſs Hand in this manner?

Take a Straw, or like thing, of the length of the Index, or the ſecond Finger, hold this Straw very right between the Thumb and right Finger, then ſtretch forth the Hand, and turn your back and the palm of your Hand towards the Sun, ſo that the ſhadow of the Muſcle which is under the Thumb touch the line of Life, which is between the middle of the two other great Lines; this done, the end of the Shadow will ſhew what of the Clock it is; for at the end of the great Finger it is 7 in the Morning, or 5 in the Evening; at the end of the ring Finger 8 in the Morning, or 4 in the Evening; at the end of the little Finger, or firſt joint, it is 9 in the Morning, or 3 in the Afternoon; 10 and 2 at the ſecond joint, 11 and 1 at the third, and mid-day in the line following, which comes from the end of the Index.

How to make Water boil and ſparkle. Take a Glaſs near full of Water or other Liquor, and ſetting one Hand upon the Foot of it to hold it faſt, turn ſlightly one of the Fingers of your other Hand upon the brim of the Glaſs, having before privately wet your Finger, and ſo paſſing ſoftly on with your Finger in preſſing a little; for then *1ſt*, the Glaſs will begin to make a noiſe; *2dly*, the parts

— of

of the Glaſs will ſenſibly appear to tremble, with notable Rarification and Condenſation; 3*dly*, the Water will ſhake, ſeem to boil; 4*thly*, it will caſt it ſelf out of the Glaſs, and leap out by ſmall drops, with great Aſtoniſhment to the Standers-by, if they be ignorant of it, which is only in the Rarification of the parts of the Glaſs, occaſioned by the motion and preſſure of the Finger.

Of the Play at Nine-Pins. You will ſcarce believe, that with one Bowl, and at one Blow, playing freely, one may ſtrike down all the nine Pins at once, yet from Mathematical Principles it is eaſie to be demonſtrated, that if the Hand of him that plays was ſo well aſſured by Experience, as Reaſon induceth one thereto, one might at one Blow ſtrike down all the nine Pins, or at leaſt ſeven or eight, or ſuch a number as one pleaſeth. For they are but nine in all, diſpoſed or placed in a perfect Square, having 3 every way; let us ſuppoſe then that a good Player beginning to play at 1, ſomewhat low, ſhould ſo ſtrike it, that it ſhould ſtrike the Pins 2 and 5, and theſe might in their violence ſtrike down the Pins 3, 6, and 9, and the Bowl being in motion may ſtrike down the Pins 4 and 7, which 4th Pin may ſtrike down Pin 8, and ſo all the 9 Pins may be ſtruck down at once.

Any Numbers under 10 *being thought upon, to find what Numbers they were.* Let the firſt Number be doubled, and unto it add 5, and multiply that Sum by 5, and add to it 10, and the next Number thought upon; multiply the ſame again by 10, and add the next Number, and ſo proceed. Now if the laſt Sum be told, mark if one Number was thought upon, then ſubſtract 35 from it, and the firſt Figure in the place of Tens is the Number thought upon; if he thought upon two Figures, then ſubſtract 35 alſo, and the 2 alſo, the ſaid 35 from the laſt Sum, and the 2 Figures that remain are the Numbers thought upon; if he thought upon 3 Figures, then ſubſtract 350, and the 3 firſt Figures are the Numbers thought upon, *&c.* *Example.*

If one thought upon theſe Figure, 5, 7, 9, 6, double the firſt, which is 5, and it makes 10, to which add 5, it makes 15, this 15 multiplied by 5 makes 75, to this 75

add

add 10, it makes 85, to this 85 add the next Number, *viz.* 7, it makes 92, this 92 multiply'd by 20 makes 920, to which add the next Figure, *viz.* 9, it makes 929, this multiply'd by 10 makes 9290, to which add 6, being the laſt Number, it makes 9296, from which ſubſtract 3500, and there reſteth 5796, the four Numbers thought on.

Now becauſe in the Figures 9296 the two laſt Numbers are like the two thought on, to avoid ſuſpicion, bid him add 12, or any Number to it, and then it will not be ſo open; as for Example, the 12 being added to 9296, it makes 9308, from which if you ſubſtract 3512, there will remain 5796, the four Figures thought upon, as before.

Two Perſons thinking two Numbers, the one an even Number, and the other an odd Number, to divine and tell who thought the one, and who the other. Bid the firſt Man to double his Thought, and the ſecond Man to treble his, then add both Numbers together, and bid the one of them caſt away half, which if he can do, the Total is even, otherwiſe odd.

The Total being even,
1 *Even.* The firſt Man thought odd,
The ſecond Man even.

The Total being odd,
2 *Odd.* The firſt Man thought even,
The ſecond Man thought odd.

Example.

1 *Man*		2 *Man*	
Thought	15	Thought	24
Doubled is	30	Trebled is	72

30 and 72 added together is 102

The Total is even, becauſe half may be caſt away.

The Total being even, the concluſion is, the firſt Man thought odd, and the ſecond Man thought even, &c.

1 *Man*		2 *Man*	
Thought	34	Thought	45
Doubled is	68	Trebled is	135

Add 68, and the Total of both is 203

Caſt

Caſt away half. *Anſwer*, I cannot.

The Total therefore is odd. The Total being odd, the Concluſion is, the firſt Man thought even, the ſecond Man thought odd.

Four Men thinking on four digit Numbers, (which are from 1 to 9) to tell what the firſt, ſecond, third and fourth Man thought.

This Concluſion findeth out any number thought, under 10000.

Four Perſons ſtanding in rank, admit the firſt think 8, the ſecond 7, the third 6, and the fourth 5.

Let the firſt Man double the number of his thought, and add 5 thereto, then multiply the whole by 5, and add 10 to the Product, noting the Total.

Bid the ſecond Man ask the firſt Man his total number, which being given him, let him add unto the ſame his Thought, and give the Total to the third Man.

Then bid the third Man to affix or ſet his Thought by the number given him, and put it one place towards the right Hand, and give the Total thereof to the fourth Man.

Laſt of all, bid the fourth Man ſet his Thought thereby, a place yet to the right Hand, in the firſt place; and add the number of 25 unto it; that done, ask him the Total number, which being given you, ſubſtract out of it 3525, the number remaining will diſcover the four Mens Thoughts.

The Digit on the left Hand ſheweth the firſt Man's Thought; the next Digit towards the right Hand is for the ſecond Man's Thought; the figure in the ſecond place repreſenteth the third Man's Thought, and the figure in the firſt place giveth the fourth Mans Thought.

Example.

1. The firſt Man Thought 8, which being doubled is 16, and 5 added thereto is 21, which multiplied by 5 is 105. Whereunto add 10, the whole is 115

2. *Secondly*, let the ſecond Man add in 7 (his Thought) ſtands thus, 122

3. Let the third Man ſet his Thought a place to t
right Hand thus, 12

4. Let the fourth Man place his Thought a pla
yet to the right Hand, thus, 1226

Alſo bid him add in 25, and it maketh 122
Demand the Total, it is 122
Which being given you, deduct 3
The remains will be 87

Anſw. The firſt Man thought 8, the ſecond Ma
thought 7, the third Man thought 6, the fourth Man

Example.

Firſt Man's Thought
Doubled is 16, and 5 added 21, multiply'd by 5
105, and 10 added is 11
Second Man's Thought added is
The Total is 11
Third & fourth Man's Thought ſet thereby 122. 6.
Twenty-five added makes 1229
Subſtract 35
Particular Thought 8. 7. 6.
Of the four Men 1. 2. 3.

To light a Fire by the Sun. Take a round Vial of Glaſ
full of Water, ſet it unmov'd againſt the Sun, and when
it is directly ſet againſt the Sun, lay behind it ſome
combuſtible Matter, in the Line that paſſeth thro' the
Vial, it will take Fire, to the Admiration of all, eſpe-
cially to ſee Fire riſe out of Water.

How to prolong Life. *Cardan* ſays, that *Ambroſia* will
do it to the longeſt date, and that *Italy* produceth this
Herb, that it ſmells ſweet, hath Leaves like Rue, with
a long and ſlender Stalk. *Wicker's Secrets.*

To live long. All Creatures who are long liv'd are good
to lengthen Man's Life, and all that are Reſtorative
ſerve to renew our Lives and reſtore Youth; alſo 'tis
believ'd that a Bear's Blood ſuck'd with one's Mouth
from a freſh Wound made, will make a Man ſtrong, be-
cauſe that Creature is ſtrong. *Wicker's Secrets.*

To

To make the Husband and Wife always agree. Let the Man always carry with him a Hart's Horn, they say you shall always have Peace with your Wife: Also the Heart of a Male Quale carry'd by the Man, and the Heart of a Female by the Woman, will cause that no Quarrel arise betwixt them. *Wicker's Secrets.*

To procure Love. Put a Ring into a Swallows or Sparrows Nest some time, which we use afterwards to procure Love. *Cor. Agrippa.* 'Tis said that all Men will Love thee if thou carry a Swallows Heart; and that a Woman will Love them that give her a Pigeons Heart pouder'd in Meat or Drink. *Wicker's Secrets.*

To know whether a Woman be Chaste. Lay a Load-stone under her Head when she sleeps, and if she is Chaste, she will embrace her Husband. *Wicker* from *Albert.*

That Women may have handsome Children. Let them at the time of Conception have some handsome Picture of their Ancestors or others, set before 'em. 'Tis said that a Woman hearing this, had a handsome Boy carv'd in Marble, and after thinking of it, the Child was like it, and as White. *Wicker's Secrets.*

To get Boys or Girls the best way. I wou'd have the Parties think at the time on which sorts they would have, and living in Love and Unity together, and in the fear of God, with submission to his Will, and be content;

Content is all we aim at with our Store,
If that be had with little, what needs more?

To make Fire with Rain. Take Oyl of Peter, Quick-Brimstone, yellow Brimstone, fresh Quick-Lime, Greek-Pitch, Ship-Pitch, mingle these, and this mixture will take Fire in any moisture. *Falopius.*

How to Walk on the Water, or safely go over a River. Take a thick Leather Gut and blow it up well, and tie both ends, bind it under your Armpits; also take Drums of Leather and put under your Feet, & with a Staff with a Leather Drum at the end of it, you may to Admiration Walk on the Water. *Wicker* from *Cardan.*

To take a Fox by a Drag-Hook. Take a large Salt-Water Fish-Hook, bait it with Flesh or Chicken, and tie it by a Line on a strong Bough, cover the Hook with a Bait or

he'll discover the Deceit, let it hang so high that he may leap to catch it, let the Hook be strengthen'd with Wire five Inches above it, lest he bite it asunder.

To take a Heron. Take a Dace, Roach or Gudgeon, run a small Wire along within the Skin on the backside the Ribs, then it coming out at the Gills, fasten a Hook to it, and stake it down, and let the Wire be fasten'd to a Line as far as the Heron can go, the Fish will swim and live some time, then leave it, when the Heron comes he swallows it and is catch'd; thus you may take in deeper places, Coots, Cormorants, Sea-Pyes and Osprey.

To take young Hawks, Crows, Pyes, Rooks, &c. You must look for Hawks in high Woods, and the loftiest Oaks, but the best way to take 'em, is when they have just left their Nests, yet, upon occasion, return to it again, as not daring to trust too much to the Wing; their Haunts are observable by their Mutings, then creep under the *Trees*, & mind the way they come in and go out from the Nest, next watch the old Hawk going for their Provision, and in her absence, climb up softly, & having a Net or more of green *Thread*, which is least perceivable, place it 'twixt the Arms of the Trees they commonly pass thro', with drawing Strings fasten'd to some of the Branches, so that when they, unaware, enter into the Cod & flutter, then pushing forward, you may draw the Strings & take 'em; and thus of the rest above mention'd.

To keep Hens from Foxes safe. 'Tis said, that a Fox boil'd and cut in pieces, and given Hens for Meat, he'll not come near them in two Months. The same holds for Ducks, Geese, &c. *Cardan.*

A Cock will not tread a Hen, if you anoint his Fundament with Oyl. *Paxamus.*

To blow out a Candle & light it again, seemingly holding the Flame in your Hand. Fold your Fingers one within another, & stick 'twixt 'em a Paper like a small Card-match, then draw your Hand over the Candle, as if you were going to grasp the Flame in your Hand, when the Paper is lighted, blow out the Candle, and put your Hand back again quickly, & the lighted bit of Paper in your Hand will light the Candle. I have seen it done to the astonishment of By-standers.

To make two Knives, with a ſhort Stick, hang on the brim of a Glaſs without falling. Take a ſmall Stick about four Inches long, and make it ſharp at one end like a Scure, get two Knives about the ſame poize, and prick the Points of 'em toward the bigger end of the Stick, ſlope-wiſe on each ſide, put then the ſmall end of the Stick upon the Brim of the Glaſs of any Liquor, and you may take the Glaſs and drink, and they'll not fall off.

To make a Pewter Diſh freeze on a Joint-ſtool by the Fire. Take a Joint-ſtool and ſet it by the Fire, then put a little Water on the middle of the Joint-ſtool, and ſpread it as broad as the Pewter Diſh; then ſet the ſaid Diſh on it, and fill it almoſt full with Snow and a handful of Salt, ſtirring it with your Hand, and uſing ſome hard Words. Tho' the Snow melts, the Diſh will be frozen ſo hard to the Stool, that you may carry it any where.

Dogs will piſs againſt any-body, if you rub any ones Cloaths with the Skin of a Red Herring: Alſo if you rub an Ale-Houſe Pot with the Skin, the Tapſter cannot make the Drink bear a Head.

To have three Capons at the Fire, one ſhall be roaſted, one boil'd, and one raw. You muſt have one to pour cold Water continually on that which is to be raw, and boil'd Water on that which is to be boil'd, and the Fire will roaſt the other.

A Cock will make ſport by fighting with a Looking-glaſs held in the Hand, throwing ſome Meat now and then.

To ſeem to cut ones Noſe half off. Let your Knife have a Gap in the middle, and unperceivedly clap it to your Noſe, and it will ſeem to be half cut off.

To light a Candle at a Picture's Mouth. Put a little Speck of Brimſtone there, then blow out the Candle, and the Red Snuff will light if held to it; be ſure there be a good Red Snuff.

To make a piece of Paper or other ſuch thing move upon a Table. Put a Beetle under it, and it will move to admiration.

A Strop to ſet a Razor. Take a little *Brick-duſt*, and a like quantity of Emery, both very fine ſifted, and min-

gled together, then take a Strop of Leather, and Oil it pretty well with *Linseed Oyl*, smearing it over with the Composition thin, just to cruft it, and rub it in well with a smoothing-Iron; when dry, rub your Razor on it. *Brick-duft* and *Linseed Oyl*, or *Flanders-Tile* and *Linseed Oyl*, will do, us'd as before. Let the Strop be good Calves-Leather uncolour'd.

To whiten your Teeth. Rub them with a little *Brick-duft* on a Linnen Rag, and wash your Mouth with clear Water after.

To brew Beer or Ale. *March* and *October* is the best time; any Water that will wash is good, Pond Water, if clear, makes the strongest, tho' Rain-water I prefer before it for wholsomness and present use; River-water ought to be taken up in dry Weather; tho' some say, in wet Weather, and when as thick as Porridge, it makes the strongest Liquor; but People must use the best they can get, which is that that is cleerest and softest. They must also get the best Malt they can. *Derby*, *Nottingham* and *Cheshire* is reckon'd best for Ale, tho' there is good and bad in all other Countries. Let your Malt be but just crusht in grinding, for, if small ground, it clods, and will not be fine, nor yield its strength. Let not your Malt be above a day ground before you use it, nor mix it; tho' some say it's best 5 days ground before, and that mix'd Malt is best, but by its standing long, it loses its Balsamick quality. Eight Bushels will make a Hogshead of strong, and another of small Beer; and 2 Meshes is sufficient, tho' some use three. Half a Pound of Hops is sufficient for a Hogshead of Ale, but a Pound and a quarter to strong Beer, and more if you keep it some Years. Use also the best Hops well scented & cur'd: The Hops that you put first in will serve the 2d Mesh pretty well, but fresh Hops in the same quantity as at first is better. Your Ingredients being prepar'd, put the Liquor into the Copper, strew a handful or two of Meal into the Copper, and it will heat sooner. When the Liquor begins to simmer, take it out, and let it not boil; and be sure you mix not the Malt with boiling hot Liquor, for it will then clod, and not yield its strength. Let the Liquor

rest

reſt in the Maſh-fat till the Steam is over, and you can ſee your Face in it, then put in your Malt and it will keep longer hot, and ſink by degrees, or if not, preſs it down with your Hand by degrees; when it ſettles put into your Maſh-fat as much more hot Water out of the Copper as will make one Hogſhead, and ſtir it two hours together; in the next place pull out the Spigot and let it run off clear. The reſt that is to be done, I leave to the care of the Brewer, and alſo offer him divers other Methods which he may make uſe of, and ſtick to that that is beſt.

Another Receipt.

In Brewing the Water ought to be pure and clear, and rather River-water than that of Wells or Fountains, being richer and fatter; that the Malt and Hops ought to be good, and are to be put in the Maſh-fat together, and the whole quantity of Water, whether put in at once or twice, is to be put in juſt ſcalding hot upon them, and being ſtirr'd well together to ſtand a due time, till the Water can extract the virtue out of the Malt and Hops, and then the Wort is to be drawn off. He ſays, That if cold Water would extract the virtue of the Malt and Hops, the Ale and Beer would be much better, but further ſays it will not do it; and *Thomas Tryon* ſays, That if you make but your Water next to boiling, but not to boil, he has try'd, that it will extract the virtue out of the Malt and Hop, and make both much more and much better to keep than that that is boiled. 2*dly*, The Doctor ſays, That the Wort ought not to be boil'd after it is made, for that the boiling of the Wort diminiſhes the Spirit: He ſays further, That a *Yorkſhire* Lady that Brew'd the beſt of that Country, told him ſhe never boil'd her Worts, and that her Ale, tho' 14 Months Old, taſted as New as if it had been but 3 Months Old or leſs; ſhe ſaid this Ale would keep 14 Months longer, which ſhe imputed to the quantity and goodneſs of the Malt; for, ſhe ſaid, put but in half the Malt, and it will not keep a quarter ſo long.

The working the quantity of the Yeaſt, he ſays, ought to be in proportion to the quantity of the Liquor, and

ought not to be wrought up too hot, but as cool as poſſibly to be done, and then the Fermentation will ceaſe when the Liquor comes to a fineneſs. The time of working being over, keep your Veſſels cool, the time of keeping is according as it is in ſtrength with Malt and Hops tinctured. It ought to be kept in a quiet Place, out of the noiſe of Carts, Coaches, Guns, Thunder, &c. all which cauſes it to Fret and Sour as well as the heat of the Air. In ſhort it ought to be kept cool and quiet. Ale new, mild and fine, purifies the Blood, and nouriſhes, is Diuretick becauſe of the Hops, and frees the Reins, Ureters and Bladder from Stones, Sand and Gravel; its good in Conſumptions, makes lean People fat. Beer is good againſt the Scurvy, Dropſie, Stone and Gout.

Tho. Tryon's *Method of Brewing Ale, Beer,* &c. Make your Water near boiling hot, but not boil, then put juſt ſo much into a Maſhtub as will wet your Malt, ſtir it and let it ſtand half an hour, then add the whole quantity of Water to your Malt that you propoſe to put in the firſt time, then let it ſtand an hour and a half, but if you would have your firſt Wort very Strong, then 2 hours, if the Seaſon be not very hot; then put what quantity of Hops you think convenient into your Receiver, and let your Wort run to them, and when your Hops have infuſed an hour and a half in the Wort, then ſtrain it off in your Coolers, and you have done with your firſt Wort. Then put upon your Malt the ſecond Liquor as the firſt, and let that ſtand on the Malt but an hour at moſt; take then what quantity you pleaſe of freſh Hops, and put in the Receiver as before, and let the ſecond Wort run to them, take the ſecond Wort and Hops together, and put into your Copper, and then let them infuſe till the Wort is near boiling, but not to boil; then ſtrain this alſo into your Coolers, and then you have done with this alſo. Now, ſays he, if you would enlarge your quantity, (which is not proper) put what quantity you think convenient of cold Water, and let it ſtand half an hour, and then run it off to freſh Hops, then put the third Wort and alſo Hops into the Copper, as the ſecond and firſt,

and

and let the Hops infuſe till near boiling, then ſtrain it off into your Coolers and its done; obſerve that you boil not your Water. He ſays the beſt ſmall Beer is to be made by adding a large Proportion of Liquor to the Malt (according as you would have it) and then mix the firſt and ſecond Wort equally together. He ſays that the quantity of Hops for Beer, if you would keep it a Year, ought to be 6 or 7 Pound to 8 Buſhels of Malt, and that all Beers and Ale are beſt New. He ſays that you ought to take a ſpecial Care that all your Veſſels are well cleanſed with cold Water, which is better than hot, and that you ought to infuſe in the Water ſome bitter Herbs or Seed 24 hours, as Wormwood dryed, and after they are well cleanſed with bitter Water, expoſe them to the open Air. Let your Wort ſtand very thin in Coolers, and let it be quite cold e're you put it to Work, for if its too hot it will ferment too violently. He ſays you ought not when your Beer or Ale is in the Tun, to beat the Yeaſt or Bawm into it, as the Cuſtom is, which is very pernicious: He tells you that inſtead of Hops, Penny-Royal, Bawm, Mint, Tanſie, Wormwood, Broom, Centaury, Carduus, Eye-bright, Betony, Sage, Dandelion and Hay; and divers others, according to their Natures and Quality, and for thoſe Diſeaſes to which they are reſpectively appropriated, uſed when dry and in their proper Seaſon, that the bitter Herbs ought not to be infuſed above half an hour; that Running or River-water is better than Spring, Well, or Pond-water, and that new ground Malt is beſt. Read his Art of Brewing and making Malt, wherein he gives you his Reaſons for what he aſſerts. Sold by *George Conyers* at the *Ring* in *Little Britain*. Price 1 *s*. The Third Edition.

Another Method of Brewing Ale and Beer, An ingenious Author ſays, that we may Brew as good Liquor at *London* as either *York* or *Nottingham* affords, and that our *Derby* Malt, Water and Hops, is as good as theirs, and that the difference lies only in the Brewing and well Ordering it. 1. He adviſes to put to 1 Quarter of Malt 75 Gallons of Liquor, or River-water, letting it boil for 1 hour, and ſo proportionably for a greater or leſſer quantity, & to every Quarter of Malt half a Pound of Hops; your Malt being

ready in the Mash-Tub, pour so much Water on it as will wet it quite thro' insomuch that the Mash may be rais'd in the Tun a considerable height; then cover it up with a Cloth very close 2 hours, preserving the remaining part of the Liquor very hot in the Copper, if not boiling. Next, the 2 hours being expired, work your Mash with proper Instruments very well, till you can discern no dry Malt in the Mash; this done let your Mash-Tun run gently into a convenient Vessel, and when you have let it run about half an hour, according to the largeness of the Mash, put on the remaining part with a Pail, throwing it all over the Mash by degrees. 3*dly*, Your Worts being all gathered and emptied from the Vessel wherein you have gathered it, into the Copper, and the Hops put therein, boil it 3 hours at least, then empty your Copper into the back Cooler. 4*thly*, While your Worts are Milk-warm, clear it in your guile Tun, while it runs clear from dregs; you may put your dregs into a Flannel Bag, and drain a quantity off clear, and of the strongest Liquor from them. 5*thly*, To your Worts, 54 gallons from a quarter of Malt, put two quarts of good Yeast, and let it work 24 hours, beating it in 3 or 4 times a day, according to the Season; Winter requiring great Care. The Guile being well wrought, tun it up into well seasoned Vessels, leaving liberty for it to work for about half a day, then bung it up close. Let your Cask stand undisturbed 6 or 10 Weeks, and it will be fine and strong. He says, that if by accident it does not work, a remedy is, take the whites of two Eggs, and half a quarter of Brandy, beat them well together, and pour them into the Guile; if the Drink is in the Cask, pour it into the Bung, and lay a warm Cloth over it, and in an hours time it will work briskly. Remember you under-lay your Cloth that you cover your Vessel with, that it may have room to begin to work, then take off the Cloth. Another way, take a quarter of an ounce of Zinziber Powder, two ounces of fine Loaf-Sugar, mix them well with some of the Liquor, being warm, and pour it in.

A way to clear Ale or Beer, tho' never so thick. Take a pint of Water, half an ounce of unslack'd Lime, mix them well together, let it stand 3 hours, and the Lime will set-

tle

tle to the bottom, and the Water as clear as Glaſs, pour the Water from the Sediment, and put into your Ale or Beer with half an ounce of Iſing-glaſs well boiled, and in five hours time or leſs, the Drink will ſettle and clear. This quantity will ſerve a Hogſhead.

The Scotch way of Brewing ſtrong Ale. They firſt boil the Water and ſcum it till its clear.

2. They put the Water to the Malt, allowing 8 Gallons of Water to every Buſhel of Malt.

3. They ſtir it well for an hour.

4. They cover it cloſe with Cloths, and let it ſtand for two hours.

5. They let the Wort run from the Malt.

6. When the Wort is all run out, they boil it two hours together, and take off the ſcum very clean.

7. They put it into Coolers, and when its well cooled it will rope like Oil.

8. Then they put it into a Tub, and put their Yeaſt to it, but if they want Yeaſt they take a Green Birchen Rod and wreath it, and ſo put it into the Wort, and it will make it work as well as Yeaſt.

9. Then they let it work very well before they Tun it, afterward when it hath done working in the Veſſel, they ſtop it cloſe with Salt and Clay, and ſo order it that it will laſt 7 Years; but becauſe that with long ſtanding it doth waſte, they fill it up with New Ale in the heat of Summer, which both makes it work and quickens it.

Of Wines, and how to make Cyder equal to Canary. Our Wines being ſo adulterated, balderdaſh'd and brew'd, it's the Opinion of Dr. *Gibſon* that they are now become prejudicial to Peoples Health. *Canary* has been reckoned, and is a great Cordial, nouriſhes much, and reſtores Conſumptive People; chears the Heart, revives the Spirits. *Alicant* is a good Stomach Wine, cauſes a good Appetite, and ſtops Fluxes, and is good againſt Priſick and ſpitting of Blood. *Sherry* is a good Stomach Wine, ſtrengthens a cold, moiſt, and weak Stomach, but not proper in Fevers, nor hot Conſtitutions. *Port O Port* is a good Stomach Wine; *Rheniſh* is a good Nephritick, and much Diuretick, good againſt Gravel and Stone, ſtrengthens

thens the Stomach, cauſes a good Appetite and Digeſtion. *Florence*, White and Red, are good Stomach Wines, the Red is binding. *French* Whitewine is Diuretick, and the *French* Claret is Styptick and binding, and breeds Stone and Gravel. But the Doctors being of Opinion that they are abuſed, I adviſe to *Engliſh* Liquors.

Cyder, of which Red-Streak is beſt, is a good Stomach Liquor, purifies the Blood, is Diuretick, and roots out the Scurvy. To make Cyder as good as Canary, you muſt make Sweets thus. Take 112 Pound of Sugar, Water 8 or 10 Gallons, in which 30 or 40 Eggs are well beaten and diſſolved; put your Sugar into your Kettle on a gentle Fire, and put to it 4 Gallons of the Egg-water, ſtir all about till the Sugar is diſſolved, when it boils put in more Egg-water, to keep it from boiling too high; and thus continue putting 1 Quart after another for about an hour, till your Egg-water is ſpent. But if you prepare your Eggwater in Parcels, to wit, 4 pints at a time, ſo will the Eggs carry away all the foulneſs of the Sugar, making it riſe in a Scum, and then take it clear; thus having done, boil it to the conſiſtency of a Syrup, which will be clear and cold, is to be put into your Cyder with a little Coriander-Seed bruis'd and tied in a Rag, and this Syrup I call Sweet. Obſerve that you may make them of Brown or White Sugar, the White makes your Cyder a Pale Colour, and the Brown of a Amber Colour, the later may do as well; this will not ſtand you in 6 *d.* a Quart; put in of this Sweet 2 or 3 Gallons, more or leſs as you pleaſe, but let your Cyder be rack'd the laſt time, and paſt the Fermentation before you put it in; thus mix your Sweets and the Spirits you intend to put in together, with a little quantity of Cyder, ſtir them together, and put all into the Hogſhead of Cyder, ſtirring them all together 7 or 8 minutes with all your Strength, with a ſtrong Staff at the Bung-hole, then ſtop it cloſe, and draw none off till 3 or 4 Months, and then its fit to drink. In making it like *Canary*, you muſt uſe more *Sweets* and *Spirits*; if you put in the Spirits before Fermentation, they will evaporate and be loſt. That your *Cyder* thus mixt with *Sweets* and *Spirits* may ever drink

drink well, it muſt firſt be put up into Wooden Casks, and then kept its due time to incorporate as aforeſaid; you may firſt make trial of a Veſſel of 7 Gallons, putting in 3 Quarts of Spirits, and 2 Quarts of Sweets; and after 12 Weeks it will be as Strong and Pleaſant as Canary, and then you may bottle it up. This Liquor will keep in a Cask 3 Years, if you keep the Cask full, but obſerve that in 8 Weeks time, the Liquor will waſte about two Pints, which be ſure fill up again with Liquor of the ſame Strength, or Stronger; and thus it will grow better and better. If you chance to keep it too long, and it becomes unpleaſant as Old Hock, then take one Hogſhead of your ſtale Cyder, and one of Tart New Cyder, before it is quite fine, and mixing them well together, Tun them up in two other Hogſheads, adding the proportion of Spirits and Sweets to the quantity of New Cyder, and then it will be as good as ever it was, and ſpeedily fit to drink. Wormwood Cyder. To make this, you do by adding Wormwood to Cyder-Royal, as you do to Wines; and this is excellent to procure Appetite, and cauſe Digeſtion.

If you would make Cyder-Royal as Strong as *French* Wine, take a Hogſhead of Cyder, and add ſome part of another Hogſhead to it, and diſtil off the Spirit; this Spirit rectifie a ſecond time, and then put into it the remaining part of the Hogſhead of Cyder, fill up the Hogſhead with other freſh Cyder; ſtir it about well, and keep it cloſe ſtopt, except one Day in 9, 10, or 20, you let it lie open 5 Hours, and thus in 3 Months its fit to drink, and will be as ſtrong as *French* Wine. To make it as ſtrong as Canary, add half as much more of the Spirit to an Hogſhead as you did the former, and two or three Gallons of Sweets more or leſs, to pleaſe the Palate, and it will be as ſtrong as Canary. Experience is gain'd by making many Trials. 1. That Cyder of the ſtrength of *French* Wine, requires to every Hogshead of Cyder 4 Gallons of Spirits, or Cyder Brandy, which is not a Pint of Spirits to 4 Quarts of Cyder. 2. The ſecond Cyder, of the Strength of Canary, requires of Spirits 6 Gallons, or Cyder Brandy, to every

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Hogſhead, that makes about a Pint and a half of Spirits to a Gallon of Cyder, and about three quarters of a Pint of Sweets to the like quantity.

The Spirit of Cyder is extracted by Diſtillation, in a Copper Veſica, Tinn'd within, with its Worm, from Cyder in all reſpects, as they make *S. V.* And obſerve if the Cyder is prickt or acid, its better for Spirits, and yields a larger quantity than that of the beſt Cyder.

I am apt to think, that if you put 2 ſpoonfuls of this Sweet, made as aforeſaid, and 1 ſpoonful of Spirit of Clary, and a ſpoonful of Spirit of Cyder into a Bottle, it will be very rich in a Months time, and will not ſtand in above 6 *d.* or 7 *d.* a Bottle. Try Experiments, by putting more or leſs, till you pleaſe your Palate. I conceive with Syrup of Clovegillyflowers or Spirit of it, or any wholſom Spirit or Syrup, you may make what taſted Wine you pleaſe. By this Method, Perry, Cherries, Currans, Gooſeberry Wine, may be made to reſemble Canary, and as good and wholſom. Doctor *Hartman* ſays he has obſerved that Brandy, Spirit of Wine one Grain, and other Spirits, if they are fine, may do; and that he has experienced, that the Spirit of Moloſſes, Raiſons, and the Lees of Wine, with other Fruits, if rectify'd and drawn fine, are as good; and that a rectified Spirit of Malt will ſerve where Spirit of Cyder is not to be had. He ſays that the firſt he compleated was thus, He put 6 gallons into a Veſſel, 2 quarts of Syrups or Sweets, and 3 quarts of the Spirit of Cyder, which after two or three Months he found to be as Pleaſing as Canary. He ſays further, that 28 pound of Sugar will make 4 gallons of Sweets, and ſo proportionably, and the whites of 8 or 10 Eggs well ſtirr'd and put in as before directed.

To make Mead. Take 4 Pound of Honey, 3 Gallons of Water, you may put 2 or 4, as you would have it in Strength; mix or diſſolve them, and then let them boil gently, and clarifie with 9 or 12 whites of Eggs, taking off the Scum, being only Blood-warm; then add a pint of Ale-Yeaſt, or a ſmall Leaven diſſolved in a pint of the Liquor, and let them work, then Tun it into a Veſſel, and being well ſettled, Bottle it up.

Note,

Note, 1. That the Liquor ought to be ſo ſtrong of Honey that it may bear an Egg, and break and boil the Shells with the Whites of the Eggs; for preſent ſpending you may put the juice of two Limons to a Gallon, and you may if you pleaſe add Cloves, Cinamon, Nutmeg, Limon-peel, Ginger, to make it taſte according to the Palate, or you may let it alone. Some put Marjoram, Mint, Thyme, Baum, or what other Sweet Herbs they like; let it ſtand 12 days before you Bottle it, and it will be fine. In a Months Botling its fit to drink: If you work it with Yeaſt, have a great care to draw it into Bottles preſently after the working is over, as in 14 or 18 days; for working it with Yeaſt makes it ſoon grow ſtale, ſowre and dead, before you are aware; but if you ſingly work it of it ſelf, and by the Suns help, or a gentle Sand-heat, or *B. M.* without adding Yeaſt or Leaven, it will keep 12 Months, if fill'd to the top, and ſtopt cloſe; if you put Spirit of Clove-gilly flowers into it, it makes it a curious Red Colour.

To make Metheglin. Take 4 pound of Honey, Water 15, 18 or 20 pound, more or leſs, as you would have it in Strength, diſſolve and mix, then put Mint, Sage, Roſemary, Baum, Thyme, Bay-leaves, Angelica, Savory, Roman-Wormwood, *Geranium Moſcatum Origanum*, Smallage, of each a handful; Ginger, Cinamon, Nutmegs, Mace, Cloves, all in groſs Powder, and ty'd up in a Bag, of each two ounces, boil it an hour, and clarifie with the Shells and Whites of Eggs only, taking off the Scum, then ſtrain it thro' a Cloth into Wood Veſſels, and being Blood-warm or cool, Tun it up. *Note*, 1. Some People will put to every Gallon of Liquor a pound of black Currans well bruis'd. 2. Keep your Veſſel always near full. 3. Cover the Bung-hole with a Plate of Lead lying looſe on, that the working of the Liquor may lift it up as need requires. 4. That as it works over, you ſtill fill it up, but not to the brim, with freſh Liquor of the ſame ſort. 5. That having done working in a Months time, ſtop the Bung cloſe. You need not work it with Yeaſt nor Leaven, for it will work of it ſelf. Some hang the Spices in it in a Bag,

not

not boiling them with it at all. For preſent Drinking, take the whites of three Eggs, three ſpoonfuls of Wheat-flower, beat them together, and mingle well with your Liquor, and it will preſently work, when done, ſtop it cloſe with Clay tempered with Salt. 6. If for long keeping, put in a pound of Hops to every Barrel; in 24 Weeks draw off the clear into another Barrel, or Bottle it. This will keep many Years. This opens Obſtructions, and cures Conſumptions. *Salmon.*

A way to make Mead. Take clarified Honey one part, and eight parts of pure Water, and boil them well in a Copper Veſſel till half is boiled away, while it boils, take off the Scum clean, when its done boiling and begins to cool, tun it up, and it will work of itſelf; as ſoon as its done working ſtop the Veſſel cloſe, and bury it under Ground for three Months, and it will taſte like Wine.

Another. Take 20 Pound of clarified Honey, and 32 Gallons of Water, mix them well together, and boil the Liquor half away, and take the Scum off clean. To make it ſmell and taſte Pleaſantly, put Flowers of Elder, Marjoram and Roſemary of each a handful, Cloves ſix ounces, Cinamon two ounces, Ginger, Pepper and Cardamum, of each two Scruples; this will give it a pleaſant taſte.

Another. To a dozen Gallons of Honey and Water mixed as before, or as you pleaſe, to make it Strong or Small, take Ginger one ounce, Cinamon half an ounce, Pepper and Cloves two drams, all groſs beaten; the one half ſow'd in a Bag, the other looſe, and ſo let it boil a quarter of an hour. You may mix your Honey and Water till it bears an Egg, by which Rule you may make it ſtronger or weaker.

Another. To ſixteen Gallons of Honey and Water as before proportion'd, take Thyme one ounce, Roſemary, Marjoram and Eglantine, of each half an ounce, two ounces of Ginger, one ounce of Cinamon, Cloves and Pepper half an ounce of each all groſs beaten, one half boil'd in a Bag, the other looſe. *Note*, That green Herbs makes *Metheglin* flat, and Cloves high-

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coloured; and that ſcumming in the boiling is injurious, the Scum being in the nature of Yeaſt, and helps to ferment.

Of Apples.

One Mr. *Allwel*, a Parſon and Doctor for all Diſeaſes, did chiefly preſcribe Milk, and often Milk and Apples, by which he did many ſtrange Cures. Indeed Apples are both Meat and Drink, and in *Kent* they have improved Ground by Planting them from 6 *s.* an Acre, to 3, 4, 5 and 6 *l.* Planting them in Hedge-Rows, or by the Hedges, about 20 or 30 Yards diſtant one from another; and one ſort or other will proſper in any Ground.

Of Pears.

They are next to Apples in goodneſs: The Tree will grow in ſtony, hungry, gravely Land, nay, in a tough hungry Clay, the Root of a Pear-Tree being more able to pierce a ſtrong and ſtiff Ground. I have heard of a Pear-Tree that has afforded 7 Hogſheads of Perry; they are as advantageous as Apples, bearing much more than Apples becauſe of their height.

The Virtues of Apples and Pears.

They are ſo great, that an Author ſays, they will beggar a Phyſician to Live where Cyder and Perry are of general uſe. They keep the Body open, and ſomewhat looſe, the ſweeteſt looſen moſt, but they are not ſo good as Pleaſant-taſted Fruit. They help concoction taken after Meat, and eaten with Bread ſtrengthens the Stomach; they are profitable in hot Diſeaſes, ſays *Galen*, being a Cordial to ſick Perſons: Roaſted and eat with Roſe-water and Sugar are good againſt Melancholy and Phrenſie, if eaten with the Juice of Liquorice and Sugar, Morning and Evening two hours before Meat. *Gerard* ſays, that the pulp of roaſted Apples, 4 or 5 (if Pome-waters) mixt in a quart of fair Water and ſtir'd well together, and drank laſt at Night, in an hour cures thoſe that Piſs by drops with great Grief and Pain, the Strangury and ſuch

Diſ-

Diſeaſes in twice taking it never fails, alſo it cures Running of the Reins, often proved. Pears have the like property of Apples.

To make Punch. Take two quarts of Water, one pint of Lime-juice, three quarters of a pound of fine Sugar, mix and diſſolve the Sugar; then put three pints of choice Brandy, ſtir them well together, and grate in a Nutmeg. This Liquor chears the Heart, and revives the Spirits beyond any other Liquor. Moderately drunk it helps Digeſtion, reſtores a loſt Appetite, and makes the Body profoundly Healthful, and able to reſiſt the aſſaults of all Diſeaſes. *Salmon.*

Experimental Curioſities.

Land not worth 2 *s.* an Acre, made worth 5 *l.* in few Years. Mr. *Blith* ſays, that Boggy Lands, if you Plant Willow, Fallow, and ſuch like, and drain it deep it will be worth near 5 *l.* an Acre, and that in 7 or 8 Years; and that Wood on good Land may be worth 60 *l.* an Acre in 11 or 12 Years.

An 100 *Aſhes Sold for* 500 l.

A Gentleman Planted 100 Aſhes, and Lived to ſee them Sold for 500 Pound at 50 Years growth. *Blith's Husb.* Page 163.

If you cover Cherry, Plums or other Fruit-Trees, with a rough Canvas, or other Cloth in Summer, and wetting of the Cloth often, it will keep the Fruit back a long time, that you may have it when others are gone.

If you put a Branch of a Cherry-Vine, Apricock, &c. in at a Window, and nail'd to the Ceiling of the Houſe, Fruit will grow within Doors.

A hot Bed of Horſe-dung laid a Foot high, and ſupported on the ſides, and Mould laid thereon three Fingers deep. If you ſow Cucumber-Seed, Turnip-Seed, Wheat or Peaſe, it will come up half an inch above Ground in two Days; this is a notable Experiment. Try alſo Cherries, Strawberries and other Fruit, that are dear when they are early.

Strawberries water'd once in three days with Water wherein

wherein has been ſteep'd Sheeps-dung, or Pigeons-dung will come early. A good and profitable Experiment.

Fruit-Trees on a South or South-Eaſt Wall, will bring forth Fruit early, and on a North Wall backward.

If you would have great plenty of Fruit, graft not only on your young Stocks, but on divers Boughs of an old Tree. To graft the Boughs of an old Tree that is a bad bearer with grafts of ſome good bearing kinds, will have large Branches, and bear Fruit in a Year or two.

Trees will grow greater, and bear better Fruit, if you put Salt or Lees of Wine, or Blood to the Root, if ſeaſonably & moderately us'd; eſpecially to old Trees, apply'd in the beginning of Winter.

To have ſeveral Fruits on one Tree. This is done by grafting ſeveral Fruits on one Tree, provided they be of the ſame kind, as ſeveral ſorts of Apples, ſo of Pears and Cherries, among themſelves.

To have Fruits of divers Shapes and Figures, This is eaſily done by Moulding them when the Fruit is young, with Moulds of Earth or Wood, of ſeveral Shapes in the inner ſide, as it is in Mould work of liquid Things; let the Moulds be made portable in the middle, that they may be open'd.

To make Trees or Fruits with Inſcriptions and Engravings on them, is by writing with a Needle, Bodkin or Knife, ſcoring thro' the Bark, when the Tree and Fruits are young; and as they grow greater, the Figures or Letters will be plainer. I have mark'd the Name of the Fruit on the Tree, and it has appear'd two Years after.

To make Trees bring forth Herbs or Flowers round 'em. Bore holes in the Bodies of them, put in good Mould, take care to put them it ſloping downwards, that the Moulds and Moiſture may keep in about the Roots of things that are ſet, then ſet Slips and ſow Seed therein.

Trees ſet on the backs of Chimneys ripen Fruit ſoon. Vines that are drawn in at the Kitchin Window will ripen above a Month before others, only take care they are not too near the Fire-ſide, leſt it dry the Branch.

Juniper Cyder, or Wine to make. Put 10 or 12 Berries dry'd in a Bottle, or a proportionable quantity to a Hogſhead,

Hogſhead, Ginger may be us'd with good Succeſs, and it makes it brisk; dry'd Roſemary put into it makes it pleaſant; Wormwood put into Cyder taſtes as Wormwood Wine; Juice of Rasberries, as good as Rasberry Wine; Elder-berries Juice the ſame. Clovegilly-flowers dry'd and ſteep'd in Cyder, gives a rare Tincture and Flavor; and thus you may make Wine of Cyder of any dry'd Flowers, Leaves and Roots whatever. *Query*, whether the Chymical Oyl of Mace, Cloves, Nutmeg, *&c.* will not do the ſame, put in with ſome Sweets, as before is directed?

Conſumption. Take three ounces of Sugarcandy and put to it three Quarts of Milk, and put it in the Oven with your Bread, and ſup Morning and Evening about half a Pint warm, I am told it cur'd one given over by Doctors.

For the Tooth-ach. Take a head of Garlick and pull the Skin off, bruiſe it, and lay to the Sole of your Feet, tie it faſt on, and it ſpeedily cures, by drawing the humour out.

Corns. Take a little Salt and a few Marigold-leaves, and beat them well together, and then lay a Plaiſter of it on 'em, and in a little time it will Cure. *Proved.*

Rats and Mice to kill. Take a Board of 2 or 3 Feet Square, and lay a piece of ruſty or fry'd Bacon in the middle, then daub the Board pretty thick with Bird-lime, round the Bait, leaving ſome little Alleys for 'em to come up to it, and they will ſtick, and cry, and draw. You may catch 12 at a time.

To prevent Thieves breaking into your Houſe. On the Eaſt-ſide of your Houſe hide the Gall of a Cow, and you will ſee the ſtrange Effects of it.

To make an Apple, or any other Fruit grow in a Vial. Put your Vial on it when young, and 'twill grow ſo large that you can't get it out, and cauſe great Admiration.

To make a Dog follow you. Take a piece of Cheeſe & put under your Armpit: This will as it were toaſt the Cheeſe, & cauſe ſuch a ſmell, that he'll follow you where you pleaſe. A ſalt *Bitch*, or the Matrix of one worn about you will do it.

To

To set a Razor as well as a Hone. Take a Strop of Calves-Leather as usual, any Shoemaker will give you one, or sell it for a small matter, then take a little *Linseed Oyl*, and Oil it very well, then take a little of the fineſt and beſt *Brick-duſt*, and as much Emery beaten fine & ſifted, (Cutlers will give or ſell you a little of both) then lay it on the Oiled Leather thin, and with a ſmoothing-Iron or Slick-ſtone make it ſmooth, when dry, uſe it to ſet your Razor on; a little *Flanders-Tile* and Emery I believe will do as well; *Brick-duſt* and Oyl laid on a Leather has done pretty well.

One *George Whitehead* made a Ship with all the Tackling to move its ſelf on a Table, with Rowers plying the Oars, a Woman playing on a Lute, and a little Whelp crying. *Scotus.*

Gaſſrel ſays, That a Clock was made, on which a Company of Shepherds play'd on Bag-pipes, with rare Harmony and motion of Fingers, while others danc'd by pairs and kept time, & others danc'd & leap'd. *Junius* ſaw at *Mecklin* in *Brabant*, a Cherry-ſtone cut in Form of a Basket, wherein were fourteen pair of Dice with thin Spots eaſie to be diſcern'd.

To black the Beard. Dry'd and burnt Lead mixt with the Juice of Crude Beets, to the thickneſs of Honey laid on, and let alone till Dinner, then waſh it off.

An Oyntment to colour the Hair red. Take of burnt Tartar pouder'd, Oyl of wild Cucumber, each a ſufficient quantity, make a Liniment to anoint the Hair.

If you would have the Ground always moiſt about any Plant, place near it a Veſſel of Water, and put therein a piece of woollen Cloth, or Liſt, and out of the Veſſel let one end thereof hang to the Ground, the other end in the Water in the form of a *Crane*. Let the Cloth or Liſt be firſt wet, and then your Water will always drop, as long as the Veſſel laſteth; then you may add more water. Let the end that hangs out of the Veſſel be lower than the Water in the Veſſel, or it will not do. If it drops not faſt enough, encreaſe the Cloth or Liſt, and if too faſt, decreaſe it.

To make Hands white. Put a Pint of Water in an earthen

earthen Veſſel leaded, and well cover'd, and boil half away; then add Juice of Limons ſix ounces, Honey, Oyl of bitter Almonds, each two ounces; mix them, and make an Unguent.

To whiten the Face. Take a Crum of White-bread, ſteep'd in a quantity of Goats or Aſſes Milk, & diſtil it.

To whiten Scars. Take Brimſtone and Salt, of each half an ounce, Camphire, Tutty, of each one dram, Roſe-water two ounces and a half, pouder 'em and mix 'em.

Water to whiten the Teeth. Take of red Allom 6 ounces, Salt three ounces, Maſtich one ounce, Myrrh half an ounce, Cloves 6 drams; mix and diſtil 'em, with which rub your Teeth.

Take a Pint of Spring-water, diſſolve a piece of Roch-Allom as big as a Nutmeg, and put a little Salt into it, with a little Vinegar, and waſh your Mouth. A little Pouder of *Brick-duſt* on a wet Cloth will whiten the *Teeth* and waſh your Mouth with this, or clear Water after it.

To make Hair black. Take of the Filings of Iron as much as is ſufficient, put it into the ſharpeſt Vinegar 10 days, then wet the Hair with it; or take of Caper Roots as much as is ſufficient, boil them in Aſſes Milk till a third part is waſted, waſh the Hair, let it alone all Night.

To make the Hair white. Take of the greater Centaury four ounces, the Lees of Allom eight ounces, Roch-Allom, Gum-Arabick, each 2 ounces, clean white Soap, Gum Tragacanth, each four ounces, Water ſix ounces, boil them to one half, and ſtrain it, and the Head being waſh'd with it and dry'd by the Sun, laſt of all waſh it with Lye.

An Oyntment to dye the Hair white. Take Swallows Dung, and the Gall of a Bull, of each a ſufficient quantity, mix them, and make an Oyntment. Or take of Elecampane, the rind of Radiſh Roots, Allom, Glew, of each one part, mix them and anoint the Hair.

An Oyntment to curl the Hair. Take ſome Rams-horn, cut it, and powder it with Oyl, and anoint the Hair. Or take Pine-kernels burnt and pouder'd, Oyl of Myrtles, of each a ſufficient quantity, mix them, and make an Oyntment.

To

To make the Hair yellow. Raw Lupines laid on with Water and Nitre will make the Hair yellow.

Of Bathing.

Snow apply'd to the Noſe, Hands or Feet, frozen with Cold preſerves 'em, but if you waſh 'em with warm Water, it periſhes 'em; and on the contrary, waſhing your Hands and Feet when they burn with warm Water, cools them.

Water made warm, and ſome Herbs put in, of Bawm, Savory, Hyſſop, Fennel, Marjoram, and other ſweet Herbs, is good to bath in; as alſo natural Baths of warm Water. Cold Water cools, and if by accident the Pores are ſhut, and the heat penn'd in, it heats.

Oyntments to beautifie the Face.

To make the Face bright. Take three ounces of Oyl of Tartar, one ounce of Seeds of Fleawort, infuſe 'em in the Mucilage, mix and diſſolve 'em in an ounce of Oyl of Roſes, Borax, Sal Gem, each one dram, and make a Liniment.

To make a colouring for the Face. Take Citron-Oyntment four ounces, Pomatum two ounces, mix & anoint Night and Morning, then waſh with Bean-flour-water.

An Oyntment to whiten the Hands. Take Oyl of bitter Almonds, well waſh'd in Roſe or Violet Water, a ſufficient quantity, white Wax enough, mix them by the Fire, and make an Unguent.

Another. Take Oyl of ſweet Almonds well waſh'd, white Wax, of each a ſufficient quantity, Camphire one dram, mix them, and make an Unguent.

To whiten the Face. Take of Virgins Milk two ounces, Oyl of Tartar one ounce, mix them, and anoint the Face at Night going to ſleep, in the Morning waſh it, and it will be clear, bright and fair.

Bad and evil Days in every Month.

January the 1ſt, 2d, 4th, 5th, 10th, 15th, 16th, 17th, 19th and 25th, as *Ægyptian* and *Chaldean* Aſtrologers ſay, and ſome Aſtrologers ſay, that what Day of the Week *Innocents Day* falls on, that Day falls out croſs all the Year. The *Jews* call *January* Shebat, its their 11th Month.

Februar

February the 4th, and *Erra Pater* ſays, the 17th a[nd] 18th. The *Jews* call it *Adar*, their 12th Month.

March the 1ſt, 15th, the *Ægyptians* and *Jews* ſay t[he] 15th, 16th & 21ſt. The *Jews* call it *Abid* or *Niſan*; it their firſt *Month*, *Exod.* 1. 3, 11. *Eſther* 3. 7.

April the 10th, 16th, 20th & 21ſt, the *Chaldeans* ſa[y] but the *Jews* ſay only the 15th & 21ſt. The *Jews* c[all] this *Month Ziv*, or the *Month Jiar*, 1 *Kings* 6. 1. I[t] their ſecond *Month*.

May the 3d, 7th & 15th, but the *Jews* ſay the 1ſt, 7th 15th & 20th, its their third *Month Siran*, *Eſther* 8. 9.

June the 4th, 7th, 10th & 16th, the *Jews* ſay that o[n]ly the 4th and 7th are evil; its their fourth *Month* called *Tamnuz*.

July the 13th, 20th & 22d, the *Jews* ſay the 15th and 20th are only unfortunate; alſo from the 19th day o[f] *July* to the 26th of *Auguſt* are call'd *Dog-days*. The *Jews* call it *Ab*, its their fifth *Month*.

Auguſt the 19th & 20th, the *Jews* ſixth *Month*, call'd *Elul*, *Nehemiah* 6. 15.

September the 3d, 6th & 7th, *Erra Pater*, the *Jews* ſa[y] only the 6th and 7th are croſs. The *Jews* call it the 7th *Month*, *Ethanim*, and alſo *Tiſra*, 1 *Kings* 8. 2. *Lev.* 23. 34. New Wine being then, *Deut.* 16. 13.

November the 5th, 15th & 19th, others ſay only the 5th and 19th. The *Jews* call it *Kiſlleu*, or the 9th *Month*, from *Keſel*, it bringeth Tempeſts, *Zach.* 7. 1.

December the 2d, 6th, 7th, 9th & 22d, the *Jews* ſay only the 6th, 7th & 11th, others ſay, the 15th & 16th. The *Jews* call this *Month Tebeth* or *Tobath*, the tenth *Month*, *Eſther* 16.

Climacterical Years, or Years generally attended with great *Mutation* of Fortune, the 7th Year of a *Man*'s Age, the 21ſt, the 49th, 63d, and the 81ſt Year, the 2 laſt are call'd the Grand Climacterical Years, in which many famous *Men* have been obſerv'd to die.

To kill Rats or Mice. Take Wheat-dough and mix it with Arſenick, and put it into the Holes or Places where they come, and it kills them. Take care you waſh your Hands after the uſe of Arſenick, for its as rank Poyſon as any

ny in the World: Alſo keep your Veſſels of Liquor co-ver'd, leaſt they going to drink, drop in, and are drowned.

To kill Mice. Take Oatmeal and pouder'd Glaſs, and mix it with Butter, and lay it where they come.

Calitrates, a Stone-cutter of *Sparta*, made Ants of Ivory, with all their Limbs, ſo ſmall, that Eye could ſcarce diſcern them. *Mercemoides* made a Chariot of Ivory, with Horſes and Charioteers ſo ſmall, that a Fly could cover them with her Wings: He made alſo a Ship and all the Tackling ſo ſmall, that a Bee could hide it. A Waggon and a Horſe made of Glaſs, that might be hid under a Fly, *Cardan.*

Mark Scaliot of *London*, Blackſmith, made a Chain of Gold of 43 Links, and a Lock and Key faſten'd to it, and faſten'd it to a Fleas Neck, which ſhe draw'd with eaſe; the Chain, Lock, Key and Flea, weigh'd but one Grain and a half. *John Stow* writes he ſaw it.

Rot in Sheep to prevent and Cure. Mr. *Worlidge* ſays, that to prevent the Rot in Sheep, you muſt feed them on dry Lands, and keep them late in the Folds in the forenoon, and feed them with Hay, mixing Salt with it, and other dry Meats; and that nothing is better to prevent and cure it than Parſley: Alſo to feed them on Salt Marſhes, and brackiſh Grounds.

Canker'd Fruit Trees. He had one that grew on Land that was Rich, Light, and Canker'd; whereupon he caus'd the Earth to be taken away round it, about four Feet from the Stem, and about 5 or 6 Inches deep, and in the room thereof caus'd Stones to be ſet cloſe & near together in Dirt taken out of the Highway, inſtead of Gravel after the manner that Streets are pav'd, and it proſper'd, and did bear mightily the next Year, to the admiration of his Neighbours; and that he alſo did the ſame to other Trees, with a proportionable quantity of Chalk, and ram'd it faſt about the Trees, and it had the like Effect as the Paving; tho' he thinks that it will not endure ſo long as Paving.

Mr. *Childry* ſays, that in the Weſt-part of *Cornwall* Winter-Swallows are found, ſitting in old deep Tin-

Works, and Holes of the Sea-Clifts, p. 13. of his Natural Hiſtory.

In the Year 1580, in *Denge*-Hundred in *Eſſex* Field Mice did ſo ſwarm, that they eat up all the Roots of the Graſs; and that a great Number of Owls came and devour'd them all, and then flew away.

Brunſwick Mum to make. Take 63 Gallons of Water and boil till the third part is conſum'd, then Brew it with 7 Buſhels of Wheat-Malt, and one Buſhel of Oat-meal, and one Buſhel of ground Beans; Tun it, but not too full at firſt: Put 3 Pound of the inner rind of Fir of the Tops of Birch and Fir, of each 14 ounces, and handfuls of *Carduus Benedictus* dry'd, 2 handfuls of Flower of *Roſa Solis*; of Betony, Burnet, Marjoram, Penny Royal Flowers, Elder, and Thyme, of each one handful and a half, and three ounces of Seeds of Cardamom, Barberries bruis'd one ounce. Put them into the *Cask*, your *Liquor* having wrought a while with the *Herbs* let the Liquor work over the Veſſel as little as you can fill it up at laſt, and ſtop it, and put in then ſome new laid Eggs, the Shells not broke nor crackt. Stop all cloſe and drink it 25 Months old; ſome add, as I told you before in page 63, Horſe-Radiſh ras'd 6 handfuls, and like quantity of Water-Creſſes, Brooklime, and wild Parſley. If Mum is carry'd by Water, it is the better.

A way to find what day of the Month every firſt Sabbath Day is, by two Verſes, knowing the Dominical Letter.

At Dover *dwells* George Brown *Eſquire*,
Great Chriſtopher Finch, *and* David Frier.

Or thus,

All do Dye, Good, Bad, End.
Get Chriſt firſt a Dear Friend.

I would know what day of the Month the firſt Sabbath Day is in *October* 1687, Dominical Letter *B*.

I firſt count what Month in the Year it is, and find

the 10th, which is *And*, which begins with *A*, and is the Letter for the first Day of that 10th Month.

Count then all the Dominicals, as in order they lye, beginning with *A*, till you come to the Dominical Letter of the Year, which is *B*, viz. *a b c d e f g* and as many as it is to the Dominical Letter, so many Days in that Month is the first Sabbath Day, *viz.* the second of *October*.

Next, I would know what day of the Month the first Sabbath-Day is in *August* 1688, it being Leap Year, and the Dominical Letters *A G*.

Note, First, that every Leap Year hath a double Dominical Letter, the first for *January*, and to *February* the 25th only; the second for the remaining part of the Year. All other Years there is but one single Letter.

In the Leap Year therefore for these two Months, take the first Dominical; and for *February* by the Verses you find, that the first Letter ascrib'd to that Month begins with *D*, so count thro' all the Dominical Letters, till you come successively to 4, and that is the Day of the Month for the first Sunday in *February*, *viz. d e f g* a which is the fifth day.

Again, I would know what day of the Month the first Sabbath in *August* 1688, its a Leap Year, and the Dominical Letters *A G*.

I first count what Month it is in the Year, and find it the 8th, then I repeat the Verses, till I come to the 8th Word, which is *Christopher*, or *Christ*. Now *C* being the first Letter for *Christopher*, is the first Letter for the first Day of the 8th Month, *August*.

Now, Then I count all the Dominical Letters in order, beginning with *C*, *viz. c d e f g*, till you come to the Dominical Letter for the Year, and as many as it is to the said *G*, so many days in that Month is the first Sabbath, *viz.* the 5th day; so having the first Sunday in the Month, 'tis easy to know all the days of the Month after, reckon from Sabbath to Sabbath.

To make Trees grow much. When any young Trees, as Ash, Elm, Birch, Oak, but Ash especially, are in their Bodies about two Inches diameter, which they are at 3 or 4 Years growth; then take a piece of a Coat of

Mail, or ſome ſuchlike Net of ſmall Wire, and putting it in the Palm of your Hand, rub it pretty hard, but not to tear off the Bark, twice in a Year, and you will find ſuch Trees will out-grow the reſt very much.

To Cure the Rot in Sheep. Put them into a large Barn, ſet about with wooden Troughs, and therein feed them with Oats a day or two, then put in ſome Bay-ſalt ſtamped ſmall, & after that a greater quantity, till ſuch time as they begin to diſtaſte it; then give them clean Oats a Day or two more, and after that ſerve them with Salt as before, and this Courſe follow till they are well.

Mr. *Wolridge* ſays, That if our waſte & common Down Grounds were inclos'd, it will feed more Sheep & Cattle by half than they do lying open; and that in caſe 10 Acres were ſown with Clover-graſs, Turnips, Cale-ſeed, Parſly, or the like, they will feed as many Cattle or Sheep as 100 Acres of the ſame Land will, that is laid waſte.

To make Butter better than ordinary, without ſetting the Milk for Cream.

As ſoon as the Milk comes from the Cow, & is ſtrain'd, then churn it, as uſually Cream is done, alſo the Cheeſe made of the Butter-milk will be better than the beſt two Meal Cheeſes that ever you eat; and one Pound of this Butter ſhall be better than a Pound and a half of the beſt Butter made of Cream. *Probatum. Hartlib's Legacy.*

A ſtrange Account of a Woman that had Three Hundred Sixty-five Children at one Birth.

On a Church-Monument at the *Hague*, there is an Earl and his Lady, and 365 Children about them, all deliver'd at one Birth, half Male, half Female, the Baſon that they were Chriſtned out of hangs in the Church, and the Biſhop's name that did it, 'tis about 200 Years ſince, as by the date appears; the Story is this: This Counteſs walking about her Door after Dinner, comes a Beggar-Woman with three Children upon her Back, to require an Alms, whereupon the Counteſs ask'd her

her if they were her own, she said yes, and that she had them at one Birth, at which the Countess revil'd her bitterly, saying, it was impossible for one Man to get 3 Children at once; the Beggar-Woman being provok'd with ill Words, and no Alms, wish'd that the Judgment of God might fall on her, and that she might bear at one Birth as many as there be Days in the Year, which she did before the Years end, having never had a Child before.

Epitaphs on some Tomb-Stones at St. Edmund's-Bury.

Upon one Joan Kitchin.

Here lies Joan Kitchin, *when her Glass was spent;*
She kickt up her Heels, and away she went.

Another on John Cabot.

Here lies John Cabot *under this Stone,*
One Thousand Six Hundred Forty and One,
Whether alive or dead, 'tis all one;
Neither Lament nor make any Moan,
Yet under his Head lay a Turf or a Stone,
Or any thing else, or nothing, 'tis all one;
Yet Pray for John Cabot, *since he is gone,*
Or if you please, you may let it alone,
For whether you Pray or Pray not, 'tis all one.

An Epitaph on Sarah Abraham, *a Taylor's Wife.*

From Abraham's *Bosom full of Lice,*
To Abraham *in Paradice.*
From Abraham *to* Abraham, Sarah's *gone,*
And left the Lousy Thief alone.

Against the biting of a mad Dog, Dr. Mathias.

Take Garlick, Rue, scraped Pewter, of each 2 ounces, of Venice Treacle one ounce, & one Quart of Muscadine; put all these into it, and stop it close, and boil it 2 Hours in a Kettle of Water, then pour off the clearest, and apply some of the dregs to the place bitten, and

give the Patient two Spoonfuls of the Liquor Morning and Evening, nine or ten Days together; this never fail'd Man nor Beaſt.

To pickle Sprats like Anchovies. Take a Peck of large Sprats without their Heads, and ſalt them a little over Night, then take a Pot or Barrel, and lay it in a Lay of Bay-ſalt, & then a Lay of Sprats, with a few Bay-leaves, then cover the Veſſel, and pitch it that no Air get in, ſet it in a cool Cellar, and once in a Week turn it upſide down, and in three Months you may eat them.

To make Punch. Take a Quart of Water, and a Quarter of a Pint of Brandy, a little Vinegar or Verjuice, or Limon Juice or Lime Juice, which of them you can get, a little Nutmeg and Sugar, or a little Ginger; and if you pleaſe a little Treacle to colour it.

Plants for making Cloths, Cordage, &c.

Hemp and Flax grow in *England*, and makes good Linnen Cloth; Cotton grows in *India*, *Arabia*, *Egypt*, &c. it makes Fuſtians, Bumbaſt-Stockins, &c. Nettles in ſome places are ſtript and made Cloth of. A fine Stuff is made of *Sericum*, which is a growing Silk, that comes out of the Iſland *Seres*, where it grows upon the Leaves of Trees, and ſome is made by Silk-worms in every Country. The Bark of Lime-trees makes Cables. The Coco-nut Tree in *India* makes Cordage and Tackle for Ships and Cloth, Cauſes and Girdles of the beſt ſort; that is the hairy Stuff next the outward Bark of it, and the Leaves ſerve to cover Horſes. At *Oxford*, among the Rarities, is a Purſe made of the Bark of an Outlandiſh Tree.

For a ſoft Corn. Take a little fine Cotton, and tie it on the Toe; and in 2 or 3 days it will cure it. Or a *Burgundy Pitch* Plaiſter will cure it.

To kill Rats and Mice. Take Raiſons of the Sun, ſplit and dip them in Arſnick Powder, and cloſe them again, and lay them near, or in their Holes.

Another. Take Coddled Apples, and mix the ſoft Pap with Arſnick Powder, and ſome Sugar.

Another. Take ſome Hogs-lard, Flower of Malt, and

Arſnick

Arſnick, mix them together; put ſome in an Oyſter-ſhell, and lay it where they come, and it will kill them.

Note, Arſnick is rank Poyſon, therefore be ſure waſh your Hands after handling it.

Pigeons are great lovers of Salt, ſet therefore a large Salt Pot in your Dovehouſe, and temper the Salt and ſome Loam together, and they will feed on it with great Pleaſure, and continue and love the Dovehouſe.

Aſſa Fætida being boil'd in Water, and the Holes of the Dovehouſe waſh'd therewith, will cauſe the Pigeons Feathers to ſcent, and that too ſo pleaſantly, that the Company they fall into will come Home with them. Cummin-ſeed boil'd in Water, and apply'd as before, is alſo an excellent Drawer; but a ſalt or proud Bitch bak'd, or roaſted with Cummin-ſeed put into the Belly, and ſet in the Dovehouſe, exceeds any thing.

The Uſe of ſome Herbs for eating.

Turnips, Carrots, Cabbage, *&c.* are ſo well known we need not tell you, tops of Hops and Turnips running up to Seed boil'd & butter'd, eat like Aſperagus, Broombuds pickl'd are of excellent reliſh, Roots of Tulips boil'd & butter'd is a rare Diſh, Muſhrooms boil'd, pickl'd, or ſtew'd, eat well, the Stalks & Leaves of Alexanders boil'd, or eaten alone, or with Fiſh, the Stalks pickl'd is a good Sallad, the Root of Arum, being raw, is biting, but boil'd is good Food, the Roots of *Tragopogon* or Goatsbeard boil'd and butter'd as Parſnips are better, Aſhweed or Jump-about boil'd when young with Bacon, is a lovely Diſh, and ſo is young Comfry: Lambs-Lettice, or Corn-Sallad is the earlieſt thing that I know is eaten raw, Penny-royal ſhred and put in a Bag-pudding, gives a favory taſte, the Buds of Elder, Nettle-tops, *Water-creſſes*, & Alexanders, make good Spring-Pottage, Horſe-Radiſh ſliced and ſcrap'd with Vinegar makes good Sauce for Mutton, ſo is Cabbage-Leaves ſlic'd ſmall, with Pepper and Vinegar, and ſo are the Leaves call'd Jack by-the-hedge. Broom, Angelica, and Baum, *&c.* ſerve inſtead of Hops to brew, and give a delicate taſte. *Cole's Art of Simpling.*

The Stalk of the great Water-dock taſtes like green Sauce, and is as pleaſant to eat as Sorrel. *Idem.*

The Vertues of ſome Plants, &c.

Cut an Elder Stick, cut it on both Sides ſo that you preſerve the Joint, put it into your Pocket when you Ride, and you will not gaul.

A handful of Arſmart put under the Saddle of a tir'd Horſe, will make him Travel freſh.

If a Foot-Man put Mugwort into his Shoes in the Morning, he may go 40 Miles by Noon, & not be weary.

The Roots of Taragon and Pelitory of *Spain* held betwixt the Teeth, makes them leave aching.

It's ſaid, that if a Woman with Child eat Quinces and Coriander Seed much, it makes the Child ingenious; & on the contrary, if they eat much Onions, or Beans, or ſuch vaporous Food, they will be Lunatick, or Fooliſh. The Leaf of the great Burdock born or laid on the top of the Head, doth draw the Matrix upward, and if laid under the Sole of the Foot, it draws downward. Calamint will recover ſtinking Meat, if laid with it while raw. If one that hath eaten Cummin, breath on a painted Face, the Colour will vaniſh away. The Seeds of Docks ty'd to the left Arm of a Woman, does help Barrenneſs. Wild Tanſie laid to ſteep in Butter-milk 9 days, and waſh their Faces with it, it makes them fair, divers other Stories there are. *Cole's Art of Simpling.*

Some Directions for Gardeners.

If you Plant one ſlip of Sage, and another of Rue, it will prevent Toads coming nigh your Sage; for they have an Antipathy againſt Rue.

When you ſet Cabbage Plants, make the Hole ſloping, and not downright, and then more probably they will become Cabbages.

Set Potatoe Roots in a Pot fill'd with Earth, and ſet the Pot within the Earth two or three Inches, and the Roots will grow greater than ordinary.

If

If Onions be taken out of the Earth, and laid to dry twenty days, and ſet again, they'll be a great deal bigger. The cutting off the Leaves of Radiſhes or other Roots, in the beginning of Winter, before they wither, and then covering the Root ſomewhat high with Earth, will preſerve the Root, & make it large in the following Spring. Rue doth proſper, and is ſtronger if ſet by a Fig-Tree, but if by Coleworts, it will not thrive. Shade to ſome Plants makes them proſper more than the Sun; as in Strawberries, Bays, &c. Therefore among Strawberries ſow here and there ſome Borrage Seed; and the Strawberries under thoſe Leaves will be larger than others.

Bays you muſt plant North, or defend from Sun by a Hedge-row, and when you ſow the Berries, Weed not for the firſt half Year the Borders, for the Weeds ſhade them. *Scordium* delighteth to grow in ſhady Places. If Roots, Strawberries, Peas and Flowers, by making a hot Bed with Horſe-dung, and caſting Earth thereon, will make them a Month more forward, and they'll turn to great Advantage by the Price: If you water 'em once in 2 or 3 days with Water wherein Pigeons-dung or Sheeps-dung has been ſteep'd, they'll grow much ſooner. Some Plants won't grow near one another, becauſe they draw the ſame Juice, and ſo rob one another; as Coleworts and the Vine, a Brake and a Reed, Rue and Hemlock: Therefore ſet your Plants of as contrary Juice as you can together. If great Trees grow in your Garden, the droppings of them hurts your Plants, eſpecially Aſhes, & all that ſpread their Roots near the Top of the Ground. *W. Cole*, and Lord *Bacon*.

The Times to gather Plants, and keeping of them after gather'd.

1. I conceive, the Sun & Moon has general Influences on Plants, the one for Heat, and the other for Moiſture, wherein the being of Plants conſiſts; and that the full of the Moon would be a good time to gather Herbs out of which the Juice is to be taken, being then moſt plentiful; but for other uſes the Leaves newly gather'd, if they are

not very young or very old are beſt, but when green ones are not to be had, make uſe of dry'd ones, either in the Sun or in the Shade, ſo they be neither over nor under us'd, it ſignifies little. 2. Thoſe that you gather for your uſe in Winter, gather a little before they run to Seed, for then they are beſt. 3. Gather them as near as you can in their proper Places; where you put 'em it matters not, if they loſe not their Virtue by too much heat, nor corrupt by too much moiſture. For Flowers gather them in their Prime, dry'd and laid up as aforeſaid. 4. Let Seeds be gather'd when ripe, and kept not above a Year, for then they decay. 5. Roots, what you have growing that you can go to on all occaſions, trouble not your ſelf to dry; but if they come from afar, hang 'em ſomewhat near the Fire, or they will rot. 6. Barks newly gather'd are beſt, & they come up beſt in the Spring. 7. For the Barks of Roots, ſlit them, and take out the Pith, and that which remains is call'd the Bark. 8. If you would preſerve the Juice of any Herb, pound the Herb and ſtrain it, then clarifie it by boiling it till no Scum ariſe, and when it is cold fill a Glaſs almoſt to the Neck, and fill the reſt with Oyl to keep out the Air, or elſe you may boil it over the Fire till as thick as Honey, which ſome Phyſicians call the *Rob*.

St. Foin, or Holy Hay, commonly call'd Cinquefoin.

Its a mighty improver of dry and barren Ground, and excellent for feeding Cattel, in *France* they ſow theſe Seeds, and Oats a like quantity, on Ground out of heart, and mow their Oats only the firſt Year, that it may root well, yet they mow it the firſt Year, but 'tis not ſo well, but the Year following you may, and ſo for 7 Years, it commonly bears 4 Load or more on an Acre; after 7 Years break it up, and ſow it with Corn till it be out of heart, then ſow it with St. Foin, as before, for it does not impoveriſh Land as other Plants do, but enrich it, when the Roots is turn'd up by the Plough. I have ſeen it thrive well in *England* on Chalky Banks, where nothing elſe would grow, and ſuch dry barren Ground is

fitteſt

fitteſt for it; (as moiſt rich Land is fit for *Clover-gra*
and great *Trefoil*, tho' St. Foin will grow pretty well o
all Land) and will flouriſh, it rooting deep, when othe
Graſs is parch'd by heat; but wet Lands ſoon corrupt
its Root. For the right managing of it, obſerve thes
Rules, or it will come to little.

1. Make your Ground fine, and kill all other Graſſe
or Plants, for they will choak it.

2. Be not too ſparing of Seed, for the more you ſow
the thicker it will grow.

3. Expect but 7 Years Crop, and then Plow it up
or ſow it again with the ſame Seed, or other Grain.

4. Let not Sheep or other Cattle bite it the firſt Year.

5. Your beſt way is to make your Ground fine, as
when you ſow Barly, and harrow it even, and then to
Plough theſe Seeds in alone, without any other Grain, a
Gardners do Peaſe, but not at ſo great a diſtance; but
make your Range about a Foot diſtance one from ano
ther, and they'll ſee it flouriſh like green Peaſe, eſpe
cially if you draw the Plough thro' it once or twice
that Summer, to deſtroy Weeds and Graſſes; and if
you do thus, great Clover and other Seeds may be
mow'd twice the firſt Year. There is another ſort at
Paris, call'd *La Lucern*, which is not inferior to St. Foin
but rather better for dry barren Land, and is to be ma-
nag'd as St. Foin. Thus you may improve barren
Ground of 2 or 3 *s.* an Acre, to forty or fifty Shillings
an Acre. There is a Graſs at *Madrington* near *Saliſbury*
that is 4 Foot long, with which they feed Hogs. I
queſtion not, but if the Seeds of it were ſown in rich
Meadows, it will yield extraordinarily.

Mr. *Worlidge* ſays, That for Clover-graſs, a rich ligh
Land, warm and dry, will afford a great Profit: That
Parcel of Ground a little above 2 Acres of Clover graſs
the ſecond Year yielded in *May* 2 Load of Hay, worth
5 *l.* the next Crop of Seed was ripe in *Auguſt*, and yiel
ded 3 great Loads worth 9 *l.* that Year, the Seed worth
16 *l.* which with the Hay was valu'd at 30 *l.* beſides th
after Paſture. Another Preſident is, that on 4 Acres gre
12 Load of Hay at twice mowing, & 20 Buſhel of Seed

on

one Load of Hay that was mow'd in *May* was worth two Load of other Hay, and the after-Paſture three times better than any other, tho' four Acres in one Year yielded eighty Pound.

Another. That 6 acres of Clover maintain'd 6 Months 10 Oxen, 13 Cows, 3 Horſes, & 25 Hogs, valu'd at 40 *l.* beſide Winter Herbage. It will proſper pretty well on any Ground that is not poor. Clover-graſs laſteth but 3 Years. An Acre of Ground will take 10 pound of Clover-graſs-ſeed, in meaſure half a Peck. The more you Sow, the better, ſome has ſown 16 pound on an Acre with good Succeſs; let your Seed be the beſt, and then in *March* or *April* ſow your Clover-graſs upon your Barly and Oats being harrow'd, or you may ſow it alone, and you may cut it about *June* the firſt Year. If you ſow it alone, the beſt time is about *Michaelmas*, and about the end of *May* you may cut the firſt Crop, the exact time is, when it begins to knot, and after feed Cattle with it till *January*: If you'll preſerve Seed, expect but 2 Crops that Year, the firſt as before, the ſecond muſt ſtand till the Seed comes to a dead ripeneſs. After your Seed is thraſht, the Cattle will eat the Stalks, but if too old, they will not. After two Years ſtanding, if you let it ſhed its Seed, it will ſtore it with Clover; and one Acre of this Graſs will feed as many Cows as 5 of the other common Graſs, and your Milk will be much better, and exceed in quantity, and it fattens well. In *Flanders* they cut it daily, as your Cattle eat it, and give it under Trees, or in Sheds in Ranks. Let not your Cattle at firſt eat too much of it, leaſt they ſurfeit. When 'tis thorough dry, in *March* thraſh it.

A ſhort Account of the Life of Ebin Yocdan, *the Self-taught Philoſopher.*

Ebin Yocdan's Mother was marry'd without her Father's Conſent, to a Perſon that he no ways lik'd, & being a Prince reputed auſtere, ſhe durſt not let him know it; in proceſs of time ſhe was with Child of *Ebin*, and was brought to Bed privately, & with the help of her Maid made

made a ſort of an Ark, pitched it well within, puts the Child into it, and with many bitter Tears and Sighs complains of her Father's Cruelty; and being no longer like to conceal it, takes it and places the Ark at the Sea-ſide, leaving it to the Mercy of the Waves and Providence; the Tide coming in, carried off the Ark or Cheſt, and in a day, or thereabouts, the Waves had driven it many Miles into an Iſland inhabited by tame Beaſts, and as the Child lay by the Shore crying and heaving, a Roe happened to looſe her young one, and hearing this Cry of the Child, made to it, where the Child heaving, and the poor Roe doing the ſame, the Lid flew open, ſhe gets the Child out and ſuckles it, and continued with it till her Death; when the Child was about 2 Years old it began to run about after the Roe, and feed on Acorns and other Fruit that grew in the Iſland among the other Beaſts in that place, but often finding hard uſage from them, they puſhing it by when Proviſion ſtood fair for its turn, vexed it often; at laſt growing to be four or five, it got a Stick, and when the Horned Inhabitants eat not fair, it would knock them over the Pate, and make them know their Driver, and then began to grow ſtout; his Foſter Mother then alſo grew old, and could not ſtir abroad for Food, which the Child perceiving, brought her Food and nouriſhed her; and one day coming home he found her dead, whereupon he began to cry out for her to eat, thinking ſhe had been aſleep, and then began to hunch her to awake her, and wondering that would not do, open'd her Eyes, and having found that ſucceſsleſs, conceived that ſhe was paſt ever eating again, ſo left her; one day ſeeing two Rooks fighting, one killed the other, and he ſee the Victor bury the other, by ſcraping a hole in the Sand, upon this he did ſo by his Mother; he then being grown a great Boy, began to wonder he could not find any Creature in the Wood of his ſhape, but that as he wanted Horns, &c. yet he had Hands, and by the uſe of them he was able to deal with any of his Enemies: One day as he was walking by the Sea-ſide, he eſpied two Fir-Trees, and by the heat of the Sun and their

beating

beating one againſt the other they fired, this made him look on with admiration, and going to take up ſome Fire in his Hand, found it too hot to hold, then eſpying ſome Fiſh near, that was oft thrown on the Shore, he takes ſome of them, lays them on the Fire, and finding in broiling they ſmelt well, he takes one of them to taſte it, and found it agreeable; he then made this his Food, and continually kept the Fire in for that purpoſe; he alſo got a young Deer, which he bred up, and made it ſo familiar, that at laſt he got on the Back of it, and ſo would ride about; and as the Beaſt encreaſed in ſtrength and ſwiftneſs, he would at times get on the Back of it, and with Stirrops made of Bark would ride with great pleaſure and ſwiftneſs; at times alſo he would Contemplate on things above, as that there muſt be ſomething ſuperiour to Sun, Moon and Stars, and all that was viſible, and that this muſt be God; alſo he affirmed, that the beſt and moſt certain Knowledge of God is not that is enjoyed by conjunction of the Mind of Man with the Supream Intellect, after the Mind is purified from its Corruptions, and is ſeparated from all Bodily Images, and is gathered into a profound ſtillneſs: While he was ſtudying Nature and Celeſtial things, it happened that a Perſon living in a City where Wickedneſs abounded, reſolved to leave it and betake himſelf to this Iſland, where having made ready things ſuitable for Subſiſtence, takes a Veſſel, and a Servant conveys him in it to the Iſland; this Gentleman walking one day in the Wood, eſpied a naked hairy Man, and makes towards him, *Ebin* eſpying him, was much afraid, and fled from him, but he purſuing, and his Geſture ſeeming Lovely, made him ſtop, then the Gentleman ſpake to him, but he underſtood him not, however he got him to his Tent, and began to make Signs to him, in a ſhort time learned him to Speak, Spell, and Read; alſo acquainted him that there was Towns and Cities, and Multitudes of People in the World in their ſhape, which *Ebin* deſired to know, thinking that there had been none but them two; he told him alſo that their Vicious Lives and Behaviour made him forſake

them

them and retire thither: *Ebin* ſaid, ſurely it was becauſe they had none to inſtruct them in virtuous Living; the Stranger told him they had multitudes of Teachers and Inſtructers, but it availed little. *Ebin* could not think it was ſo, but was willing to go to the place and inſtruct them himſelf, having by his own Attainment and the Perſons Inſtruction improved in Knowledge and Truth: and after having preached ſome time among them, he found his Friends Words too true, whereupon *Ebin* and his Friend returned whence they came, and there ended their days: This is a ſhort Account, and according to the beſt of my Memory. Yours, *I. B.*

A ſtrange Account of what hapned at Hamelin *in* Germany, *by Rats and Mice.*

This Town was annoy'd with Rats and *Mice*, and it chanced that a Py'dcoated Piper came thither, who covenanted with the Burghers for a great Reward, if he could free them from the Vermin, and he was to have it a Year and a Day after. The Agreement made, he began to play on his Pipes, whereupon all the Rats and *Mice* followed him thro' a great Slough hard by, and all were drowned, ſo the Town was freed. At the Years end the Piper comes for his Reward, the Burghers put him off ſlightingly, and often offer'd him a ſmall Sum, which he refuſing, and ſtaying ſome days in Town, on Sunday Morning at high Maſs, when moſt People were at Church, he began to play on his Pipe, and all the Children of the Town followed him out of Town, to a great Hill, not far off, where the Hill opened and let him and them all in, and then cloſed up again. This hapned a matter of 300 Years ago, and in that Town they now date their Bonds and Bills, and other Matters, from the Year of the going out of their Children; and at the Foot of this Hill is now a great Stone Pillar, whereon this Story is Engraven.

A ſtrange Story of eight Engliſh Men left in Greenland.

In the Year 1630, two Ships were ſent to *Greenland*, and arrived *June* the 11th; the Captains Ship ſtay'd at *Bell-ſound*, and the *Salutation* at the fore-Land. The Captain having killed many Whales, ſent for the *Salutation*

tion to take in ſome of the Train-Oil: In the way the Maſter ſent eight Men to kill Veniſon, who took with them two Dogs, one Gun, two Lances, and a Tinder-Box; went on Shore, and killed 14 Deer, and ſtaying all Night, the next day proved foggy, and the Ship was ſo far from Land they could not eſpy her, whereupon they got into their Shallop to ſeek for her, and to be more eaſie, heaved their Veniſon over-board, but all in vain, the Ship was gone, and they aſtoniſhed to find themſelves left where neither Turk nor Chriſtian had ever inhabited; nay, they had heard that ſome Male-factors were Repriev'd on condition they would Live there, and when they had ſeen it, choſe rather to return and be Executed, than dwell there; and alſo that nine Men had by accident once been left there, and all were torn to pieces by wild Beaſts. And that that augmented their Sorrow was, that they wanted neceſſary Proviſions; no Cloaths to keep them warm, nor Food, nor Shelter. In this extremity they reſolved to go to Green-Harbour, and hunt for Veniſon; and they kill'd 19 Deer, and 4 Bears, with which they loaded their Shallop, and alſo carry'd ſome Fritters of Whales to *Bell-Sound* to their Tent, where they intended to Winter. When they arrived at *Bell-Sound*, they took out their Proviſion, and with part of a Tent, pieces of old Casks, and old Shallops, made up a Houſe or Cabbin, where they lodged two and two, and with great Induſtry provided for Wood and Shelter againſt the Cold; their Beds was the Deer Skins dry'd. Having thus fitted themſelves, looking out *September* the 12th, they eſpyed two Sea-Horſes aſleep on the Ice, with an old Harping-Iron they ſlew them both, and ſkead and eat them, and a little time after they kill'd another, but the Darkneſs and Cold encreaſing, and having but half enough Proviſion, they faſted on Wedneſday and Friday. To mend their Cloaths they made Thread of Rope-yarn, and Needles of Whale-bone. *October* 10th the Nights grew long, and the Sea froze over, and Fear and Grief began to ſeize them; then they prayed to God in this Diſtreſs, for Strength and Patience in their Miſery,

Miſery, and by his Aſſiſtance chear'd up themſelves to uſe means for their Safety. They roaſted their Veniſon, every day half a Deer, and ſtow'd it in Hogſheads, leaving raw a quarter for every Lord's Day. Now here another Affliction befel them, their Whale-Fritters grew mouldy, and their Bear and Veniſon would not hold out 5 Meals a Week, then they cut off one Meal more, and three Months fed four Days on the mouldy Fritters, and three they lived on Bears and Veniſon; and they not only wanted Meat, but Light alſo of the Sun, from *October* the 14th, to *February* the 3d, but the Moon ſhined as with us in *England*; then with Rope-Yarn and Oil they made a Lamp, which they kept continually burning, to their great Comfort. In *January* the Days lengthned, and the Cold ſtrengthned, that it rais'd Blifters on their Skins; if they touch'd Iron it ſtuck to their Fingers; if they fetch'd Water, they were ſore as if beaten, and Snow Water was all their Drink from *January* to *May*, which they melted with hot Irons. In *January* they perceived their Food would but laſt 6 Weeks, then they pray'd to God for Supply, and looking out ſoon after, they eſpy'd a Bear and her Cubs coming towards their Tent, they ſlew them with their Lances, and they ſerved them to the 20th day of *March*, then Foxes and Fowls came abroad, and they catch'd 60 Fowls, and about 60 Foxes, and kill'd 7 Bears, and then they eat two or three Meals a day, and their Strength encreaſed. *May* the 1ſt, they went out to ſeek for more Proviſion, and they found two Ships come from *Hull* into the *Sound*, which hapned to be the Men that had left them there: The Ships Crew was mightily glad to find them, and with Joyful Hearts embraced one-another; the Men left their Tents, and went a Shipboard, where being Clothed and refreſhed with Victuals, in a ſhort time recovered Strength, and with the *London* Fleet came ſafe into the River of *Thames*. Their Names were, *John Davis*, *Richard Koller*, *Henry Bets*, *Thomas Ayres*, *Robert Goodfellow*, *John White*, *William Fletcher*, and *Edward Pelham*.

Charity

Charity rewarded. A pleaſant Story.

One Day a Perſon being Fiſhing, it hapen'd that he pull'd out a dead Man's Skull; he imagin'd that it came there by chance, and that it was but a Deed of Charity to bury it, whereupon he goes home, and gets a Spade, and finding a convenient place, he fell to digging, and having dug deep, he eſp'd a large old Bag, which pulling out, found it to be full of Gold. And thus the poor Man was enriched unexpectedly.

Urine. In *Holland* they preſerve the Cows Urine as carefully as the Dung for their Land; old Urine is very excellent for the Roots of Trees, *Columella* ſays, That a good Husband may make 10 Load of Dung for every great Beaſt in his Yard, and as much for every one in his Houſe, and one Load for ſmall Cattle, as Hogs; this is ſtrange to us, and I believe there are many ill Husbands by this Account. I know a Woman near *Canterbury*, who ſaveth in a Pail all the droppings of Urine, and when the Pail is full, ſprinkleth it on her *Meadow*, which cauſeth the Graſs to grow much, at firſt it looks yellowiſh, but after a little time it grow'd ſo wonderfully that her Neighbours like to accuſed her of Witchcraft.

An Account of the Iſle of Pines.

About 50 Years ago, as near as I remember, was an Iſland diſcover'd by one *Geo. Pines*, from whence it had its Name, who being driven by ſtreſs of Weather on this unknown Coaſt, and his Ship ſplit, by the aſſiſtance of ſome Planks, he, two white Women, and one black Woman, got aſhore in this Iſland uninhabited: The place afforded Goats, Deer, and plenty of delicious Fruit; it was alſo a very warm and pleaſant place to dwell in, and by theſe 3 Women, in about 30 Years time, he had ſtockt the Iſland with many hundred of People. Another *Merchant* being by chance drove upon this Iſland, and perceiving it Peopled with a naked white People, enquires what the name of the Place was called, *&c.* the Man anſwering in *Engliſh*: He with divers of the Ships Crew went aſhore, taking their Guns along with them; and as the Man was Conducting them along, one eſpying a Deer, ſhoots him; the noiſe of the Gun ſo affrighted the

the Man, and the reſt of the Iſlanders, that they fled into the Mountains and Woods for Shelter. But in ſome ſhort time, by finding out ſome, and their civil Behaviour towards them, made all the reſt to come about them, where great Civility paſs'd; and an Account alſo was given of their Original.

As for their Religion it was Proteſtant, and ſome part of a Bible they had by them: they had a Place of Worſhip, where Prayer and other Religious Exerciſe were ſometimes performed, but through their diſſentions among themſelves, occaſioned by the *Phils*, (which is the Name of the Black by whom *Pines* had a great number Children, who were in Rebellion;) their Worſhip was almoſt laid aſide, which our Merchant hearing, cauſed his Men and others to take moſt of the Blacks and Try them, and Execute ſeveral of the Ring-leaders of the Rebels, ſo that he brought them to Obedience to the Whites. He alſo erected a Building of Timber for their Governour, placing the Eldeſt, and he that the Inhabitants Voted for, in that Station. The reſt of the Inhabitants generally dwelt in Hutches, or places reſembling Bowers. Thus having fixed them, and brought them into a Loving and Peaceable Condition, having inſtructed them in Religion and Politicks, left them a Bible, and what other Books they could ſpare; and alſo leaving them what Cloths they could ſpare for their Governour, alſo they left them Axes, a Gun, Powder, and other Materials. After they had continued ſome conſiderable time among them, they took leave of them, in much Love and Friendſhip; the Inhabitants conducting them to their Ship, ſet Sail for *England*, leaving as near as I can remember, above eight hundred Whites, and two hundred Blacks. This is the beſt Account I can give of this Matter, leaving you to judge the Truth of the Relation.

Of Bees, and how to manage them to great Advantage.

Bees are Delightful and Profitable, if managed with Care, in order to which, I ſhall give theſe Directions.

If you have no Stocks of Bees, but muſt buy them, I adviſe you firſt not to give Money for them, but ſome other Commodity; for tho' there be nothing in it but a Superſtition

ſtitious Obſervation, yet ſuch things often diſhearten People that are apt to credit ſuch Reports. Having Purchaſed, you muſt be ſure to carry them gently in a Sheet between two Perſons on a Pole, in the Night-time, that they be not diſturbed, nor their Combs diſordered; the beſt time to remove them is in *April*, and then carry them to a pleaſant Place, leaſt they leave you, nor muſt you immediately open them after you have placed them in your Garden, but wait till they are at reſt, which you will know by their ceaſing humming; be ſure place them that the Hive Mouth be to the riſing of the Sun, obſerving that the Air and Water, as alſo Herbs, Trees and Flowers about them be very wholſom. Thoſe they much delight in, are Roſemary, *Caſſia*, Thyme, Saffron, Bean-Flowers, Muſtard-Seed, Flowers, Pinks, Mellilot, Poppy, Roſes, and all ſweet Flowers, Herbs and Trees. Thoſe they diſlike, are Worm-Seed, wild Cucumbers, Elms, Spurge, Laurel, Southernwood, and all bitter Herbs and Trees, delighting moſt in Valleys, and near purling Streams. The beſt Honey is extracted from Thyme, the next beſt from wild Thyme, and the third from Roſemary, tho' there is good Honey where none of theſe grow; alſo where your Clovergraſs, St. *Foin*, &c. grows, good and much Honey is produced. Be ſure, if you intend to mind Bees, that you be cleanly and ſweet, and eat no ſtinking things, as Garlick, Onions, &c. leſt they ſting you, and keep their Hives clean from Cobwebs, Moths and other Filth, or they'l not thrive. Read more of theſe Matters in Mr. *Worlidge* his Compleat Bee-maſter, price 6 *d.* and *Ruſden* of Bees, price 1 *s.* 6 *d.* and *Butler* of Bees, price 4 *s.* The only three Books extant on this Subject. All Sold at the *Ring* in *Little Britain*. In the beginning of *April* Bees begin to Work, and if they ſtand in a pleaſant Place, they will work ſo chearfully, that they will afford Honey three times in a Summer, *viz.* the later end of *May*, the later end of *July*, and the later end of *Auguſt*, if the Summer be temperate; though if you would have them ſubſiſt well in Winter, to take their Honey in *May* and *July* is ſufficient.

If

If it happen that by reaſon of the young Brood, the Hive be overcharged, which by their cluſtring about the Mouth of it, and humming, you may plainly diſcern; prepare a new Hive, ready rub'd, with Fennel, Bean-tops, Thyme, Baum, Marjoram, Bean-flowers, Milk and Honey, Hyſſop, Mallows, and with ſome of theſe rub the Hive well, but rather with a Sprig or Branch, in Mead or Honey and Water, or with Milk and Salt, or Salt only; and when you have rub'd the Hive well with the Herbs, that it's wet, obſerve the coming out of the young Bees for ſeveral days, eſpecially when the Sun ſhines hot on them, leaſt they ſwarm on a ſudden, and take Wing and fly away, which is prevented by ringing on a Warming-pan or Candleſtick, &c. when you ſee they are ſettled either on Tree, Hedge or Ground; if they ſettle on the Ground, lay the Hive prepared as before directed, over them. If on a Tree, take your Hive rub'd with ſweet Herbs, and let one hold up the Hive, and another with a gentle hand ſhake the Bough they hang on, that they may fall into the Hive, then immediately ſet it on a large Cloth, and take Boughs that are green, and put juſt under the place you take the Bees from, and cover them with ſome more Boughs, and the corner of the Cloth they ſtand on, and let it reſt till all the Bees are gone in. If in a hard Winter Honey fail, then repleniſh their Store with Brown Sugar mixed with Anniſeed-water, till its juſt liquid, and by filling long pieces of ſlit Cane with it, you may put the Cane gently into the Mouth of the Hive. You may give them alſo Honey and Raiſins after the ſame manner. Be ſure you cover them with warm Houſings of Straw, and feed 'em with Care, and they'l reward your Pains bountifully.

Thus I have given you the Opinion of ſeveral of the beſt Authors for the improving of this noble Inſect, and that with as much Brevity as poſſible.

Its ſaid Bees will not fly away, if you ſmear the holes of their Hives with the Dung of a Calf newly killed. *Wicker.*

Bees

Bees will not fly away, if you bruiſe the Leaves of the Wild and Garden-Olive-Tree together, and about the Evening anoint their Hives with the Juice, or elſe with Water and Honey, both the Walls and the Hives.

To know if Honey is mixed or falſified, throw ſome into the Fire, and that that is falſe will not burn clear. *Diophans.*

The beſt Water for Bees, is that that runs through Stones and Pebbles, and is very clear. This makes them Healthful, and makes good Honey, and you muſt lay in great Stones and pieces of Wood for them to pitch upon when they drink. If you have no Running Water, bring it to them from a Well or Fountain, in Pipes, leaſt they fall Sick with carrying Water.

In taking Honey, you ought to leave them a tenth part, both in Summer and Winter, but in Winter you muſt take but one third part. *Didymus.*

To make Ratifia.

Take a quart of Brandy, a quart of Spring-water, a pound of Sugar, an ounce of Cinamon, a dram of Cloves, a quarter of a pint of Orange-flower-Water; put theſe into a Skillet cloſe cover'd, and ſet it on a ſlow Fire, till the Sugar is diſſolv'd, let it infuſe for 24 hours, then ſtrain it, and colour it with Cochinele. If you think it not ſtrong enough, put more Brandy to it.

To make the Teeth white.

Put ſome Brick-duſt on a wet Linnen Cloth, and rub them, and waſh the Mouth well with fair Water.

To harden the Edge of Knives or Swords, &c.

Water preſſed through a Cloth from Worms, beaten and mixed with the Juice of Radiſh in equal portions, make the Edges of Knives, Swords, and all other Inſtruments, that are quenched twice or thrice in them, when they are Forged, that they'l cut Iron like Lead; this came from a Cutler in *Paris.*

A ſtrange Story of an Ape.

A Jugler of *Bengall* brought an Ape before the *Mogul* that would do many ſtrange Feats; whereupon the *Mogul* took a Ring from his Finger, and gave it to ſome People about him to hide, to try if the Ape could find it

it out, who presently went to the Person that had it; and many other Tryals of this Nature he perform'd: At last says the *Mogul*, There are many Disputes about which is the true Prophet that should come into the World, we, says he, are for *Mahomet*, the *Persians*, *Haley*; the *Pythians* for *Zortost*; the *Jews* for *Moses*, and the *Christians* for *Christ*; unto which he added seven more that my Author does not remember, which made up twelve. These twelve Names were written in twelve Tickets, and put together to see if the Ape could draw out the Name of the true Prophet; this done, he put his Foot or Paw among them, and pull'd forth that Paper with the Name of Christ in it; the *Mogul* did it a second time, and he drew as before. A Nobleman of that Court seeing this, thought it might be a Juggle, and desir'd he might make a third trial, which granted, he put eleven of those Names together, and kept that of Christ in his Hand, the Ape searching as before, pull'd out his empty, and so he did two are three times together. The *Mogul* demanding the reason, it was answer'd, that perhaps it was not there; the Ape being bid to search for it, he pull'd out one after another all the eleven Names and tore them; then running to the Nobleman, caught him by the hand where the Name of Christ was conceal'd, and took it from him, open'd it and shew'd it the *Mogul*, but did not tear it as the other: Upon which the *Mogul* kept the Ape, and gave his Master a Pension, calling him the Diving Ape. *Religion and Manners of the Heathens.*

For Tanning of Leathers.

For Upper-Leathers. When they come from the Butcher they must be put in Water a day and a night, and if they be dry'd three days, or thereabout, until they be soft, bruih them once or twice on the Beam to take off the Flesh: This done, take fair Water, and put it in a Tub, and thereunto put Broom cut small every second or third day; to wit, to the quantity of six or eight quarts of Water put about a gallon of Broom or a good hatful. This must be done three times, so that in six or nine days your Liquor will be prepared. Then take out a

all the Broom out of the Liquor wherein you are to put your Hides, as many as your Liquor will cover: And you muſt draw them up and remove them from their poſture once a day, or once in two days at the fartheſt; ſo that they will be ready to have the Hair taken off in eight or ten days time, according to the ſtrength of the Liquor. Then make another Liquor of about the ſame quantity, whereunto you muſt put about half a Buſhel of Pigeons-dung, and therein let your Hides lie four days; every day taking them out to work them one day on the Fleſh ſide, and the other day on the Grain ſide alternatively. Take the ſame quantity of fair Water, whereunto you muſt put a gallon of Bark beat to Powder, on one day, and the next day as much; which done, the third day you may put thereunto your Skins, removing of them three or four times the firſt day, caſting in every time a handful of Bark; the next day doing the ſame once a day only, and this for five or ſix days; and when you ſee the Liquor become white, then you muſt make a new Liquor directly as the former, but you need not ſtir them in this Liquor but once in four or five days, which will laſt longer than the firſt, but when it comes white alſo, it muſt be renewed as the other, which is thus to be done: Having taken out your Skins, put in as much Bark as you did at firſt for the two firſt days, and ſo renew your Liquors until the Skins be tanned thoroughly, which, ordinarily ſpeaking, will be ſix Weeks or two Months.

For Sole-Leather.

As they come from the Butcher, take them and ſprinkle them on the Hair ſide with Aſhes, the Fleſh ſide being compoſed as it was on the back of the Beaſt; and ſo being ſprinkled, fold it up as you have ſprinkled it, until no part of the Hair ſide be left without Aſhes, and ſo keep it in a roll till the Hair will eaſily come off, which is ordinarily in three or four days, if it be kept warm. When the Hair is off, caſt it into fair Water until the next day: Then fleſh it and work it alſo at the ſame time on the Grain ſide, which being done,

done, put it into an Ouſe, or Bark Liquor, ſtrong or weak it is all one, for the ſpace of three hours, and ſtir it and remove it up and down for the ſaid time twice an hour. Then take four or five Pots of Water, into which you muſt put a Buſhel or thereabouts of Rye-meal ſcalded in a great Kettle of the ſaid Water, and when it is ſcalded and ſtirred in the boiling Water, put it into the reſt of the Water in a Veſſel, and let it ſtand until it have a white Cream on it and work in bubbles, which will be ſix or eight days; then put the ſaid Hydes or Backs into the ſaid Liquor for the ſpace of four or five days, handling or removing them once a day.

Another way for Tanning Upper-Leathers.

Firſt take the Hyde, be it green or dry, and put it into Water for eight days, every day taking it up and put it down again into the Water without working it till the laſt day, then fleſh it. Then put it into a peck Engliſh Meaſure of Lime (which quantity will ſerve for any Hyde) for the ſpace of ſeven Weeks; but the whole peck muſt not be put in at once, but half of it to about four buckets of Water, in which it muſt lie three Weeks, and then hair it with a Shovel, *&c.* Then the other four Weeks let it lie in the like quantity of Water and Lime, which done fleſh it over again; then put it into a Liquor made with freſh Water and Hens-dung (a peck of which will ſerve ten Hydes, and ſo proportionably) wherein it is to lie eight days, and handled up every day once, and then work it well out thereof, and grain it, which done, put it into an Ouſe made with half a buſhel of Bark and Water for one Hyde, and ſo proportionably, wherein it is to remain eight days, but every day twice or thrice handled, that is taken up and put down again; then put it in a freſh Ouſe made as before, and there let it ſtay a month without handling, and ſo continue three months more in the ſame manner, renewing each month your Ouſe.

For Sole-Leather.

The ſame Order is to be obſerved as above, but only the Sole-Leather muſt lie longer by eight days at leaſt in the Lime, and not ſo long by two or three days in Liquors made with Hens-dung, and it needs not to be ſo often handled as the Upper in the firſt Ouſe, and have two Ouſes at the leaſt, or three more than Upper-Leathers. *Note*, that if there be many Hydes together, there needs not the full proportion to each, as when there is but one.

The Art of Japanning and Painting in Oil. You muſt furniſh your ſelf with theſe things following: Strainers, Timnels, Pencils, Varniſh, divers kinds of Briſtles, Feathers, Hair, Shells and Gallipots to mix Colours and Minerals in; Gums of divers ſorts, Gold, Braſs-duſt green, Leaf-Silver, Leaf-Gold, Dragons Blood, Copper and Tin finely powdered, Varniſhes of divers kinds, *&c.*

Now let the Wood that is to be japan'd, be ſmooth, dry, and of a firm Grain, free from Knots and Greaſineſs; thus prepared, lay the Ground-work of your Colour, whether black, red, or whatever Colour you pleaſe; let them be laid even, and in all parts alike with a Bull-ruſh, often drawing it forward and backward, whilſt the Work is ſet over a gentle Heat, as a Chafing-diſh of Charcoal, or the like; but be ſure let it not be ſo hot as to bliſter the Work or make it ſhrink, for that ſpoils all, and you muſt begin again. If you patch it, it looks unſightly, and it muſt have time to dry, betwixt every laying on of the Varniſh; ſo it being well dry'd and ſmooth, in laying, always begin in the middle of the Board or Table, then with your large Pencil carry the Strokes from thence to one End, then in the middle fix it again, and ſo continue till all the Work is covered; and keep your Hand ſteady on the Edges, that you do not overlap them, ſo that the Varniſh may not ſplaſh nor hang on them, and this you may avoid by drawing the Pencil or Bruſh once or twice againſt the Gallipot ſide.

Now

Now to proceed, when your Work is dry, dip a Rag in fine Tripoly ſifted and powdered like Meal, and rub it over with that and poliſh it, preſſing pretty hard with the Rag, and carry a ſteady Hand, till by degrees the whole is poliſhed, and a bright ſhining Gloſs is ſet on it; and if you cannot do this at one time, then omit a day or two, and then proceed; but obſerve that you do not rub harder in one place than in another, to make the Work appear unequal, and to prevent Inequality, leſſen your quantity of Tripoly, as the Work comes nearer finiſhing, and when it is duſted as well as may be, wipe off what remains with a wet Sponge, and with a dry Cloth take the wet quite away, then in fine mixture of Lamb-black and Olive-Oil rub it over, and take off that Rubbing or Blackning with another dry Cloth, and it ſets a better gloſs on it. But if your Japanning is white, carry a very gentle hand over it, and cleanſe with Flower that's fine mix'd with Sweet-Oil of Olives, and this may ſerve for a general Direction.

To order a black piece of Japanning. Take Varniſh of Seed-lack, and Lamp-black a ſufficient quantity to make a curious black, mix it well, and over a gentle heat, when the Wood is warm'd, as before is directed, go three times over it, and betwixt every going over with the Varniſh let it dry, and carry a Bull-ruſh over it ſmoothly, holding one hand at one end, and the other at the other, to make it equally ſmooth; having done this, mix of the thickeſt Seed-lack a quarter of a pint, with an ounce of *Venice* Turpentine; let them be well mixed, then add more black to deepen the former, and with your Bruſh go over 6 or 7 times, letting it dry betwixt every going over; when you find it's very ſmooth, let it ſtand to dry well, which will be in 3 or 4 days, if fair Weather, or elſe it may be 6; then take a Rag dipt in Water, and thickened with fine Tripoly, poliſh it ſeveral times every other day, and when done effectually, waſh it off with Water and a Sponge, the Water being well ſoak'd up with a fine dry Rag, go over it with Oil and Lamp-black, and it will ſet a Jett-ſhining gloſs on it.

To make a Murrey, or Olive-colour'd Japann'd Work.

Take two parts of yellow Oker, to one part of Vermilion finely powdered, then mix them well with the thickeſt Seed-lack Varniſh: after the firſt going over, thin the Colours a little with Varniſh of Shell-lack, and ſo let it dry well between whiles, go four times over it, ruſhing it ſmooth, when the Colour is laid on in a full Body, and then waſh it over nine times with Seed-lack, ordinary Varniſh, and ruſh it again, and when dry, which will be in 4 days, clear it up with Tripoly, and with Oil of Lamp-black, poliſh it.

And thus by taking Care to proportion Colours with Varniſh, you may Japan any Colour, or ſpeckle with Braſs, Copper, Gold or Silver. But for Trees, Flowers, Birds and Beaſts, or any Figure varying from the Colour of the Ground-work, they muſt be finely drawn with a Pencil, in Colours mixt with the proper Varniſh, when a ſtrong Ground-work is laid, yet you muſt draw them ſo even and ſmooth, that no part may rub off in the poliſhing, when other goings over of Varniſh has ſecur'd them, and then they will look very lively, as if inlaid in the Wood, tho' they may be painted when the Piece is poliſhed, and varniſhed over after with a fine Varniſh. But they will not then look ſo gliſtering; thus you may ſpeckle with any Mineral of Hardneſs, paint Landskips, Rivers or Trees, Sun or Moon, *&c.* on Tables, Cabinets, Looking-glaſſes, *&c.* with Eaſe and Pleaſure.

To Limn or Paint in Oil or Water-colours. The moſt material thing is to mix your Colours, in order to which obſerve the Rules following.

Red Lead, Lake and Vermilion, a ſmall quantity makes a fine deep Scarlet.

Red Lead and Maſticote heightned with a little Whiting, makes a curious Flame-colour, White and Lake a Murry-colour.

Spaniſh-brown and White makes a good Hay-colour.

Indico, White, and Spaniſh-brown, a good Purple.

Smalt

Smalt and Pink heightned with White, makes a light Green, or with little or no White, a deeper Green.

Indico and White make a Lead or ſad Colour.

Indico, Lake and white Lead, a Violet-colour.

But as for ſimple Colours uſeful in this Work, they are as follows.

Blacks. Lamp-black, Earth of Collen, Cherry-ſtone-black, Sea-coal-black, and Ivory-black.

Greens. Verdigreaſe, Verditer, Terrevert.

Yellows. Oaker, Pink, Maſticote, Spruce, Pink or Piemont.

Reds. Indian, Vermilion, red Ornatto and Lake.

Whites. White Lead.

Blue. Indico, Smalt, Ultramarine. There are Colours alſo that you muſt be knowing before you can hit them right.

And theſe are Spaniſh-brown, burnt Spruce, and Umber.

Alſo take notice that Ivory, Cherry-ſtones, Umber and Oaker muſt be burnt e'er they will grind; but Maſticote, Vermilion and Ultramarine, or Piement and Smalt may be tempered without any grinding. A Crucible is beſt to burn them in, and let them not be over burnt, leſt they loſe their Colour.

Oils uſual in this Art are Linſeed-Oil and Oil of Walnuts, the latter is beſt for Drapery.

Now having many Pencils of various ſizes, ſtrain your Cloth upon a Frame very tight, and being prepared for drawing with Pencils of red Lead, French Chalk, or Sallow-wood burnt to a Coal, and ſharpened as a Pencil, take Care you draw your out-ſtrokes in juſt Proportion, with Pens of hard ſmall Quills, as thoſe of Ravens or Crows; its alſo neceſſary you be furniſhed with a threefooted Compaſs, to take in and out as the Caſe requires it; one of them of white or black Lead, another of red Chalk, and another of Indico, or ſome other hard Colour differing from the former; and with theſe you are to mark out the equal diſtances, after you have drawn your outſtrokes.

To bring your Hand in uſe, draw Fruits, Flowers, Beaſts, Birds, Landskips and the like; as alſo Ovals, Circles, and all ſorts of Mathematical Figures; or copy ſome things from an ingenious Hand, and beſure endeavour to imitate Nature as near as poſſible, make even the Paſſions and Geſtures, as Smiling, Frowning, a Wildneſs of Look, a Majeſtick Gravity. Obſerve that to the Eyes, Chin, Neck and Mouth, great regard is to be had, for on theſe depend a great Streſs of Judgment, and a ſteady Eye; as alſo regard muſt be had to Years, and here you muſt be curious in making an Aſpect of 3 Kinds, as from the higheſt part of the Forehead to the Eye-brows, from thence to the bottom of the Noſe, and laſtly, from that to the end of the Chin, always marking a due Proportion in the length of the Forehead and Noſe.

In very full Faces, the diſtance between the Eye-brows is the length of one Eye; and in a 3 quarters ſide Face, it muſt be leſſen'd proportionably, and the Noſtrils be plac'd againſt the nether Corner of the Eyes, and when the Face is very fat and plump, it requires a little ſtanding out of the Cheeks, and on the contrary, when the Jaw-bone ſtick out in lean Faces, the Cheeks muſt have ſomewhat of falling in, or a little Hollowneſs.

Draw Hands and Arms in their proper Poſture, proportionable to Nature, neither too long nor too ſhort, and always obſerve in this and all other Pieces to caſt the Shadows as from the Sun, and the Lights towards it, and the farther the Shadows are off, the fainter they muſt be, and Orbicular Bodies muſt have circular Shadows, proportionable to the Light that cauſes it, and if it be a ſtanding Figure, the Leg on which it leans the greateſt Streſs, muſt be drawn firm, and appear ſtrait and ſteady, that the Figure may not ſeem falling or declining.

In Drapery draw the Out-lines firſt, that a Space may be left within for the leſſer or greater Folds, and ſo the greater may be broke into leſſer that may be contracted into them, and the cloſer the Drapery ſits, the ſmaller and narrower you muſt make the Folds: and

when

when you Shadow, you muſt mind to make the utmoſt the ſofteſt, and the inwardmoſt the hardeſt, as to the greateſt Folds; but in reſpect to the leſſer, break them off as is moſt advantageous for illuſtrating, and the finer and ſharper the Folds muſt be, as the Drapery is finer than ordinary, but where they ſit cloſe, there requires no Folding.

To make Sport with Jacks, Ducks, &c.

Tie a Line a Yard long to a Bladder, and bait it with Worms, and throw into a Pond, and if Ducks, Geeſe, or Jacks takes it, you will have dainty Sport.

To make a Dog piſs upon any Perſon.

Rub the Perſon's Cloaths or Stockins with the Skin of a Red-Herring.

To ſhew a Perſon a Card, and he not know what it is.

Take a Card, ſuppoſe a 5, a 3, or a 9 of Spades, cut out the middle Speck exactly with a Pen-knife, and turn the Face to the bottom of your Hat, and thro' the black Lining it will ſeem to be an Ace; keep it a Yard or two from the Perſon, and he'll not diſcover the Cheat.

To prevent Jumping over a Tobacco-Pipe.

One Man would lay, that another could not jump over a Tobacco-Pipe that he would lay in that Room; which the other thought eaſy enough, but he laid it ſo near the Wall that he could not do it, unleſs he had leap'd thro' the Wall.

To drink Wine or other Liquor a ſtrange way.

Lay a Tobacco-Pipe over a Glaſs of Beer, Ale, or Water, and hold it tite, turn up the Glaſs leiſurely, and the Drink will run dribbling down the Pipe into your Mouth, and not ſpill a drop. One empty Glaſs laid over another that's full of Liquor, and you may drink by the empty Glaſs.

To ſet a Glaſs or a Pot of Ale, or Water upon two Trenchers, and ſtrike them away, and not break the Glaſs, nor ſpill the Water.

Set two flat Trenchers, one on the top, and the other at the bottom of a Glaſs or Pot, on a Table, let them be about one Inch over the Table, as exactly alike as may

may be, then with a Broom-ſtaff, Cat-ſtick, or the like, ſtrike both your Trenchers at one blow, and the Trenchers will fly from under the Glaſs, and not ſpill; nay, if you lay five or eight Farthings on the middle of the upper Trencher, the Farthings will fall into the Drink, and not ſpill neither. I have ſeen it done, and a little Practice will bring you to it.

To place five or ſix Counters, Farthings, or Tobacco-Pipes on a Table, and go out of the Room, and tell the Perſon what Counter, Farthing, or Pipe he touch'd.

This is done by Confederacy, and the Confederate is a Smoaking his Pipe, and if he touches the firſt Farthing or Counter, and gives one Whif only, and takes his Pipe out of his Mouth, by this the Party knows it was the firſt that was touch'd; if he touch'd the ſecond, he gives two Whifs, and takes the Pipe out of his Mouth; if the third, three Whifs; if the fourth, four Whifs; and ſo on.

I have ſeen a Perſon anſwer this Queſtion before any ſaw him come into the Room, by this Confederacy, ſaying, if a Man within touch the firſt Counter, Pipe, or Farthing; then he was to be call'd in, and the Confederate ſaid, *All People keep Silent.* *A* being the firſt Letter of the Sentence, he knew it was the firſt Pipe; And if he ſaid, *Be Silent*, he knew it was the ſecond Pipe, Farthing, or Counter, it began with *B*; if he ſaid, *Can you tell which he touch'd?* he knew it was the third, becauſe *C*; or, *Can you tell*, was firſt; *Do not tell him beſure*, that's the fourth; for it begins with *D*. *Every one hold his Peace*, that's the fifth, for it begins with *E*: And ſo on, as far as you pleaſe; this looks very ſtrange and wonderful.

To cut a Thread in two, and ſeem to make it whole again.

Take half a Yard of Packthread, and tie it at both ends, then tell them they ſhall cut it in two, and you will make it whole again; then privately put another Piece of Packthread thro' the Links, and cover it ſo that they may not diſcover the Cheat; and when they have cut the Thread, put it into your Mouth, as if you would make it whole with your Teeth, and draw the

the looſe Piece out into your Mouth, & the Packthread will be whole, to the Admiration of the People.

To wrap one on the Knukles.

Take a Knife, and hold the Point of it to a Vein on your Wriſt and ſay, Touch but the top of the Haſt, and it will make the Blood ſpirt to the top of the Ceiling, which he doing, you may wrap him on the Knukles.

To carry a Jug or Earthen Pot ſticking on the Palm of your Hand.

Take a piece of Paper, ſet it on Fire, and caſt it into the Mouth of the Jug, and preſently clap the Palm of your Hand on the Mouth of the Jug, and it will not fall, but you may walk about with it ſo ſticking.

To put a Padlock on a Man's Mouth.

This is eaſily done, when you have a Padlock, as the Perſons that ſells 'em will ſhew you; it will ſtick ſo faſt to your Cheek, that it cannot be got off without a Key, the way they put it on is thus: You bid two Perſons hold a Six-pence edgeways between their Teeth, then ſay you will convey 'em both in one Perſon's Mouth by ſpeaking a Word, then going to one of them, pretend he does not hold it right, and as you ſeem to touch his Cheek, clap on the Padlock, and it will hang like a true Lock, and make the People laugh; in a little time you may hold the Key in the palm of your Hand; and with your Fingers take hold of their Noſe, bid 'em blow, and then drop the Key, and open the Lock.

To play with Balls.

Let your Balls be about the bigneſs of a Sloe, made of Cork, cut round with a Knife, then ſtuck on a Pin, and held over a Candle; when burnt a little, rub them in the Palms of your Hands, till they are black and round; hold one of theſe Balls in your Hand, and three other of the ſame ſize, on the Table; and taking up one of the three with your right-Hand, put it into your left-Hand, and ſay, *there is one.* Then take the ſecond, and put into your left-Hand with the Ball you held in your right-Hand, and ſay, *there is two,* tho' you know there is three, then ſhutting your Hand, ſay, *there is the third* Ball in your right-Hand, and clap your right-Hand,

Hand on the upper part of your left Arm, and firmly keeping the Ball, ſay, *Quick-Balls*, and come all quick into my Hand, when holding your Palm downward, ſay, here they be all three together; and ſo lay them down on the Table. There is good Sport made with theſe Balls, by putting them into little Tin-Cups; but you muſt uſe to Palm your Balls betwixt the Joints of your Fingers, and ſhift them that time only; and an Inſtructor can make you a Proficient. At the Hopital-gate, a Toy-ſhop, near *Smithfield*, you may buy theſe Boxes; and an Egg-Box; and a Box to put Money into, and convey out, ſeeming to drop thro' the Table an Egg-Box, Knife, and Pudding; and other Things of this Nature. All theſe, and divers other Things you'll find eaſy, tho' they ſeem wonderful to the beholders.

To make on a Table juſt twenty Chalks.

Strike them as faſt on the Table, as you can ſpeak theſe Words; *viz.* one, two, three, my Dame come down and ſee; I will lay a Pint of Wine, if you will lay with me; that here's no more, nor no leſs, then juſt Twenty. Thus:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20.

That one cannot jump over a Rolling-pin.

Lay a broad Board on a Rolling-pin, on the Floor, and let the Perſon ſtand on it, and when he goes to jump, the Board will ſlip from under his Feet, and throw him; and you may lay he cannot jump over it, if you place it cloſe to the Wall.

Cards to know what one thinks.

Take 21 Cards, and deal them ſeven in a heap, bid the Perſon take them up, and think of one, then deal them, and bid him tell you which heap it is in again, and do ſo the third time: But remember that you take up that heap he ſays the Card is in firſt; then take up another heap, and put at bottom, and put the third heap at top; So that every time your heap that they ſay has the Card in it be plac'd in the middle; and the Card thought upon will be the 11th Card. It is very eaſy, and ſeems very ſtrange.

To preserve any Instrument of Iron or Steel from Rust. Grind the Filings of Lead fine in a Mortar; adding a little Oyl of Spike thereto, and with this rub the Iron or Steel; I had this from a cunning Armour Smith. Oyl of Tartar will do it also.

To beautify Wood, especially Deal-Counters or Boxes. Take *Linseed Oyl*, and rub them over with it, or Lees of Oyl, it makes them beautiful. *Mizaldus.*

A sweet Tinder to make. Take some very fine Deal-Shavings, and burn them as you do your Tinder, then strike Fire with your Flint and Steel, and lay some fine Shavings on it, and blow it, it will flame in your Box, and these Shavings makes you more Tinder. *Probatum.*

Powder for the Hair. All white Powder is made of Starch. Take the best Starch, that that is whitest and dryest is best, and pouder it and sift it to 20 Pound of Starch Powder, in a Box put a Pound of Rose-leaves, mix 'em well together with your Hand, and every 4 Hours fail not to shake them well, that the Flowers may not heat, the next Day about 24 Hours time sift them, and put a Pound of Rose-leaves in again, and so for three times; all the while let your Box be open, from the first time you put the Flowers in, till you take them out, and the Powder will be made. Powder of Orange-Flowers is made the same way, and Powder of Musk Roses. Read Book of this Subject, call'd the *French Perfumer.*

Orange-flower-water distill'd in a cold Still. Infuse two Pounds of Orange-flowers dry in two Pints of Water four Hours, then pour it into the Still, and distil it. Thus you may make Rose-water, or most other sorts.

A sweet Bag of Roses. Take what quantity of Roses you please, the closest is best, take the green Buds off, and in their stead put many Cloves, dry them betwixt two Papers in the Sun, and put them into your sweet Bags. Thus you may make one of Orange-flowers.

A Perfume to wear about you. Beat in a small Mortar a piece of Benjamin as large as Pea, pour over it a few Drops of *Peru*, then add to it four Grains of Civet, stir it and mix it well with the Pestil, and put it up with Cotton into your Perfume-Box.

Hand on the upper part of your left Arm, and firmly keeping the Ball, ſay, *Quick Ball*, and come all quick into my Hand, when holding your Palm downward, ſay, here they be all three together; and ſo lay them down on the Table. There is good Sport made with theſe Balls, by putting them into little Tin-Cups; but you muſt uſe to Palm your Balls betwixt the Joints of your Fingers, and ſhift them that time only; and an Inſtructor can make you a Proficient. At the Hopital-gate, a Toy-ſhop, near *Smithfield*, you may buy theſe Boxes; and an Egg-Box; and a Box to put Money into, and convey out, ſeeming to drop thro' the Table an Egg-Box, Knife, and Pudding; and other Things of this Nature. All theſe, and divers other Things you'll find eaſy, tho' they ſeem wonderful to the beholders.

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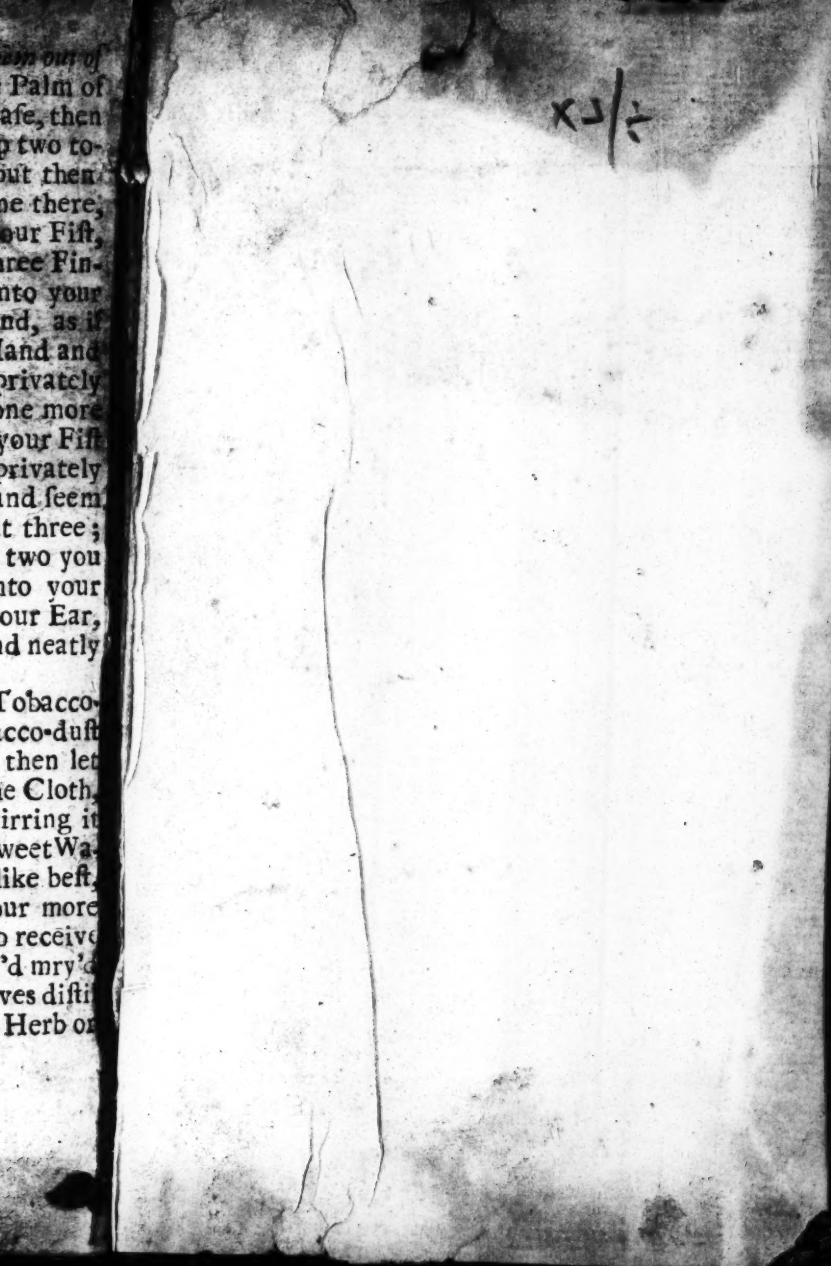
To ſeem to put Peaſe into your Ears, and put them out of your Mouth. Take five Peaſe, lay them in the Palm of your left-hand, then ſay you ſee here is five Peaſe, then with three Fingers of your right-hand, take up two together, privately ſhutting your Hand, and put them to your Mouth, blowing them, and drop one there, and bring the other, and put it on the top of your Fiſt, then ſay, you ſee it is here; then with your three Fingers, as if you took it up, ſlip or let it drop into your Hand undiſcern'd, and then liſt up your Hand, as if you thruſt it into your Ear; then open your Hand and ſay, you ſee here is but four; then take up privately two more Peaſe, and blow as before, and drop one more into your Mouth, and bring one, and lay it on your Fiſt as before, and then drop it into your Hand privately as before, and bring your Hand to your Ear, and ſeem to thruſt it in, and then ſay, you ſee here is but three; then do as before, and then ſay, there is but two you ſee; then put the other two both together into your Mouth; and after thruſting your Finger in your Ear, bring 'em out of your Mouth. This is eaſy; and neatly done, very amazing.

To make Snuff, and how to cleanſe it. Put your Tobacco-duſt in a ſtrong Linnen-cloth, ſoak your Tobacco-duſt in a Pail of Water, only once in 24 Hours, then let the Water out, and ſqueeze the Snuff well in the Cloth, then dry it on Wicker Hurdles in the Sun, ſtirring it carefully whilſt it's a drying: being dry, pour ſweet Water over it, as Roſe-water, or any other you like beſt, and make it as a Paſte; dry it again, and pour more Roſe-water to it, and dry it again, and it's fit to receive what Smell you pleaſe. Mint dry'd and powder'd mry'd a pleaſant Snuff, or ſome Roſe-leaves and Cloves diſti and powder'd, and put to your Snuff, or what Herb o Flower you pleaſe.

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